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TANGANYIKA TERRITORY.

Annual Medical Report

FOR THE YEAR ENDING

31st December, 1925.

Price 5/-



DAR ES SALAAM
PRINTED AND PUBLISHED BY THE GOVERNMENT PRINTER



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OFFICE OF THE
DIRECTOR OF MEDICAL AND SANITARY SERVICES,
DAR ES SALAAM,
TANGANYIKA TERRITORY.

22nd September, 1926.

Sir,

I have the honour to submit, for the information of His Excellency the Governor and for transmission to the Right Honourable the Secretary of State for the Colonies, the Medical Report on the health and sanitary condition of the Tanganyika Territory for the year 1925 together with the Returns, etc., appended thereto.

I have the honour to be,
Sir,
Your obedient servant,

J. O. SHIRCORE,

*Director of Medical and Sanitary Services,
Tanganyika Territory.*

THE HONOURABLE

THE CHIEF SECRETARY TO THE GOVERNMENT,
DAR ES SALAAM.



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TANGANYIKA TERRITORY.

Annual Medical and Sanitary Report 1925.

SECTION I.—ADMINISTRATIVE.

(a) Staff.

European:

Director of Medical and Sanitary Services.	22 Nursing Sisters (5 appointed during the year).
Deputy Director of Medical Services.	1 Laboratory Assistant.
Deputy Director of Sanitary Services.	1 Chief Clerk (appointed during the year).
Director of Laboratory.	2 Clerks (1 appointed during the year).
2 European Clerks (1 appointed during the year).	1 Storekeeper.
33 Medical Officers.	2 Assistant Storekeepers.
2 Dental Surgeons (1 appointed during the year).	2 Hospital Quartermasters (appointed during the year).
1 Assistant Bacteriologist.	1 Superintendent, Lutindi Asylum.
1 Entomologist (appointment created during the year, but not filled).	1 Matron, Lutindi Asylum.
4 Senior Nursing Sisters (2 appointed during the year).	1 Building Inspector (appointed during the year).
1 Sister and Health Visitor (appointed during the year).	12 Sanitary Superintendents (4 appointed during the year).

Asiatic:

1 Assistant Surgeon.	2 1st Grade Clerks.
2 Senior Sub-Assistant Surgeons.	8 2nd, 3rd and 4th Grade Clerks (2 appointed during the year).
37 Sub-Assistant Surgeons (15 appointed during the year).	3 Sanitary Inspectors.
28 Compounders (10 appointed during the year).	

African:

7 Clerks	392 Hospital Dressers, Hospital Attendants and Menials.
13 Dispensers.	A varying number of Sanitary Labourers.
22 African Urban Sanitary Inspectors.	
50 African District Sanitary Inspectors.	
27 Vaccinators.	

APPOINTMENTS.

The following appointments, promotions, changes, etc., were made during the year:—

Europeans:—

Dr. P. A. Clearkin (1st Assistant Bacteriologist, Kenya) to be Director of Laboratory,	
30th September, 1925.	
Dr. J. F. Corson to be Assistant Bacteriologist,	8th January, 1925.
Dr. D. V. Latham to be a Medical Officer,	5th January, 1925.
Dr. T. Langan to be a Medical Officer,	8th January, 1925.
Dr. H. Fairbairn	do. do.
Dr. J. Williamson	do. 24th January, 1925.

APPOINTMENTS—*Contd.*

Dr. C. R. Steel to be a Medical Officer,	24th January, 1925.
Dr. W. H. Dye	do. 18th April, 1925.
Dr. J. W. Graham	do. 30th April, 1925.
Dr. R. C. Speirs	do. do.
Dr. J. C. R. Buchanan	do. 7th August, 1925.
Dr. H. J. O'D. Burke-Gaffney	do. do.
Dr. J. S. Armstrong	do. do.
Dr. R. Mackay	do. do.
Dr. B. O. Wilkin	do. do.
Dr. A. McKenzie	do. 20th August, 1925.
Dr. I. Sanderson	do. do.
Dr. G. S. P. Noble	do. do.
Dr. L. A. Willmott	do. do.
Mr. A. S. Newton to be a Dental Surgeon,	4th September, 1925.
Miss D. A. Porter to be a Nursing Sister,	19th February, 1925.
Miss O. Borrett	do. 5th March, 1925.
Miss I. D. McDonald	do. 10th July, 1925.
Miss M. C. L. Mapp	do. 20th August, 1925.
Miss E. B. Crichton	do. do.
Miss A. L. Ryder	do. do.
Miss L. M. Bishop	do. do.
Miss C. M. Bishop	do. do.
Miss M. Kay	do. 27th November, 1925.
Miss M. E. Fraser	do. do.
Miss M. D. White	do. do.
Miss J. B. Watt	do. do.
Mr. P. W. Morgan to be a Building Inspector,	18th March, 1925.
Mr. H. L. Bolton to be a Sanitary Superintendent,	16th May, 1925.
Mr. C. Harlen	do. 7th August, 1925.
Mr. A. Hume	do. 4th September, 1925.
Mr. A. L. George	do. 17th September, 1925.
Mr. H. J. Rance	do. 25th November, 1925.
Mr. J. E. Crawley to be a Hospital Quartermaster,	7th August, 1925.
Mr. R. Kildea	do. 4th September, 1925.
<i>Asiatics:—</i>	
Mr. Dewan Singh to be a Sub-Assistant Surgeon,	29th April, 1925.
Mr. G. V. Godbole	do. 24th June, 1925.
Mr. V. S. Nijasure	do. do.
Mr. Harbal Singh	do. do.
Mr. G. A. Mhaiskar	do. 8th July, 1925.
Mr. N. B. Tote	do. do.
Mr. S. E. Puram	do. do.
Mr. G. V. Sane	do. 22nd July, 1925.
Mr. Maluk Singh	do. do.
Mr. Ram Singh	do. do.
Mr. P. N. Nair	do. 11th November, 1925.
Mr. J. B. Nathan to be a Compounder,	5th April, 1925.
Mr. S. L. Dourado	do. 24th July, 1925.
Mr. P. F. X. Pimento	do. do.
Mr. J. X. E. Gomez	do. do.
Mr. F. Lopez	do. do.
Mr. C. Vaz	do. do.
Mr. A. R. de Silva	do. do.
Mr. P. J. A. Falcon	do. do.
Mr. P. A. Pacheco	do. do.
Mr. C. K. Narayanan to be a 4th Grade Clerk, Director of Medical and Sanitary Services' Office,	22nd July, 1925.

ACTING APPOINTMENTS.

Dr. J. F. Corson, Acting Director of Laboratory from 19th February to the end of the year.
 Dr. C. F. Shelton, Acting Senior Medical Officer from 6th December to the end of the year.
 Dr. R. Nixon, Acting Sanitation Officer whole year.
 Dr. A. I. Meek, do. from 27th March to the end of the year.
 Dr. A. R. Lester, do. from 12th April until 13th November.
 Dr. A. McKenzie do. from 19th September to the end of the year.
 Dr. R. Mackay, do. from 19th September to the end of the year.
 Mr. H. W. Hassard, Acting Medical Storekeeper from 1st December to the end of the year.

PROMOTIONS.

Europeans:—

Dr. J. H. Thomson, Medical Officer, to be Senior Medical Officer, 1st August, 1925,
 Mr. J. L. Mason, Clerk, Medical and Sanitation Department, to be Chief Clerk, 1st April, 1925.
 Miss E. L. Kemsley, R.R.C., Nursing Sister, to be a Senior Nursing Sister, 1st April, 1925.
 Miss E. Bishop, Nursing Sister, to be a Senior Nursing Sister, 1st April, 1925.
 Miss B. G. Allardes, Nursing Sister, to be a Sister and Health Visitor, 1st April, 1925.
 Mr. W. H. Jones, Sanitary Superintendent, to be an Assistant Medical Storekeeper, 6th February, 1925.

RETIREMENTS.—Nil.

AGREEMENTS EXPIRED.

Mrs. M. A. Cartlidge, Nursing Sister, 3rd September, 1925.

AGREEMENTS TERMINATED.—Nil.

RESIGNATIONS.

Miss M. E. Shearing, Nursing Sister, 13th July, 1925.

DEATHS.—Nil.

INVALIDINGS.—Nil.

(b) List of Ordinances affecting Public Health enacted during the year.

During the year the following Enactments, Rules, and Notices, which have a bearing on medical matters, were gazetted:—

Government Notice No. 1—Under the Townships Ordinance, 1920 (No. 10 of 1920). Proclamation No. 1 of 1925—proclaimed Sadani, Lipumba and Liwale, within the limits defined, as townships for the purpose of the Ordinance.

Government Notice No. 12—Under the Merchant Shipping (Fees) Ordinance 1922 (No. 36 of 1922)—conceded a reduction of fees in respect of the issue of Bills of Health:—

Ocean-going vessels other than dhows—Shs. 15 at each port of call.

Coasting-vessels other than dhows—Shs. 15 at first port on each voyage; other ports free.

(For this purpose a “coasting vessel” means a vessel plying only on the coasts of Tanganyika Territory, the Zanzibar Protectorate and the Kenya Colony and Protectorate).

Dhows—Shs. 5 at first port on each voyage; other ports free.

Government Notice No. 70—Under the Whipping Regulations of 5th October, 1918, as amended by the Whipping Ordinance, 1925, an order was promulgated cited as the Whipping Order, 1925. Under this Order a whipping may be inflicted upon the bare buttocks with a light rattan cane free from knots and not less than half an

inch in diameter, the weight varying to a heavier or a lighter type according as to whether the subject is an adult or a juvenile. The cane replaced the hippopotamus hide lash hitherto used over a wet cloth, which was placed over the buttocks to prevent wounding of the skin, and the consequence was several complaints drawing notice to somewhat severe cutting of the skin due to whipping on the bare buttock. This has been remedied since and a wet cloth is spread prior to whipping.

Government Notice No. 73—under the Indian Lunacy Act (Act IV of 1912), see section 28—the Senior Administrative Officer for the time being in charge of the Tanga District, the Senior Medical Officer for the time being stationed at Tanga and the Medical Officer of Health, Tanga, were appointed to be visitors for the Asylum at Tanga.

Government Notice No. 76—under the Native Authority Ordinance, 1923 (No. 25 of 1923), section 6—empowers the District Authority to make regulations or to give an order that the birth of any native child within the jurisdiction of the Authority be reported to the headman or the Authority. The reporting of births and deaths is no new procedure, for monthly reports detailing deaths and births were submitted by the Akidas of Dar es Salaam and Tanga during the German regime. Statistics of births and deaths are supplied to us from Tabora and Tanga, but Dar es Salaam has been of little assistance. Data relating to births is of extreme importance in relation to Maternity and Child Welfare Work, and the situation calls for action.

Government Notice No. 78—under the Master and Native Servants Ordinance, 1923 (No. 32 of 1923)—prohibited recruiting of natives in the Ufipa sleeping sickness area.

Government Notice No. 80—under the Prisons Ordinance, 1921 (No. 14 of 1921)—Dietary Table for Native Prisoners amended the Regulations published as Government Notice No. 171 of 1924 by substituting for the meat ration in Scale A the following ration: Meat with bones . . . 6 oz. per diem.

Government Notice No. 82 appointed officers, of similar standing to those appointed at Tanga, to be visitors at the Asylum at Tabora under the Indian Lunacy Act, 1912 (Act IV of 1912).

Government Notice No. 116—under the Masters and Native Servants Ordinance, 1923 (No. 32 of 1923), recruiting of natives, in the Tabora-Ufipa sleeping sickness or adjoining areas specified in the schedule, was prohibited.

(c) Financial.

Revenue	...	...	...	...	...	...	...	£6,425
Expenditure	...	...	...	...	...	...	...	£146,689

(See also Table II page 130).

SECTION II.—PUBLIC HEALTH.

(a) General Remarks.

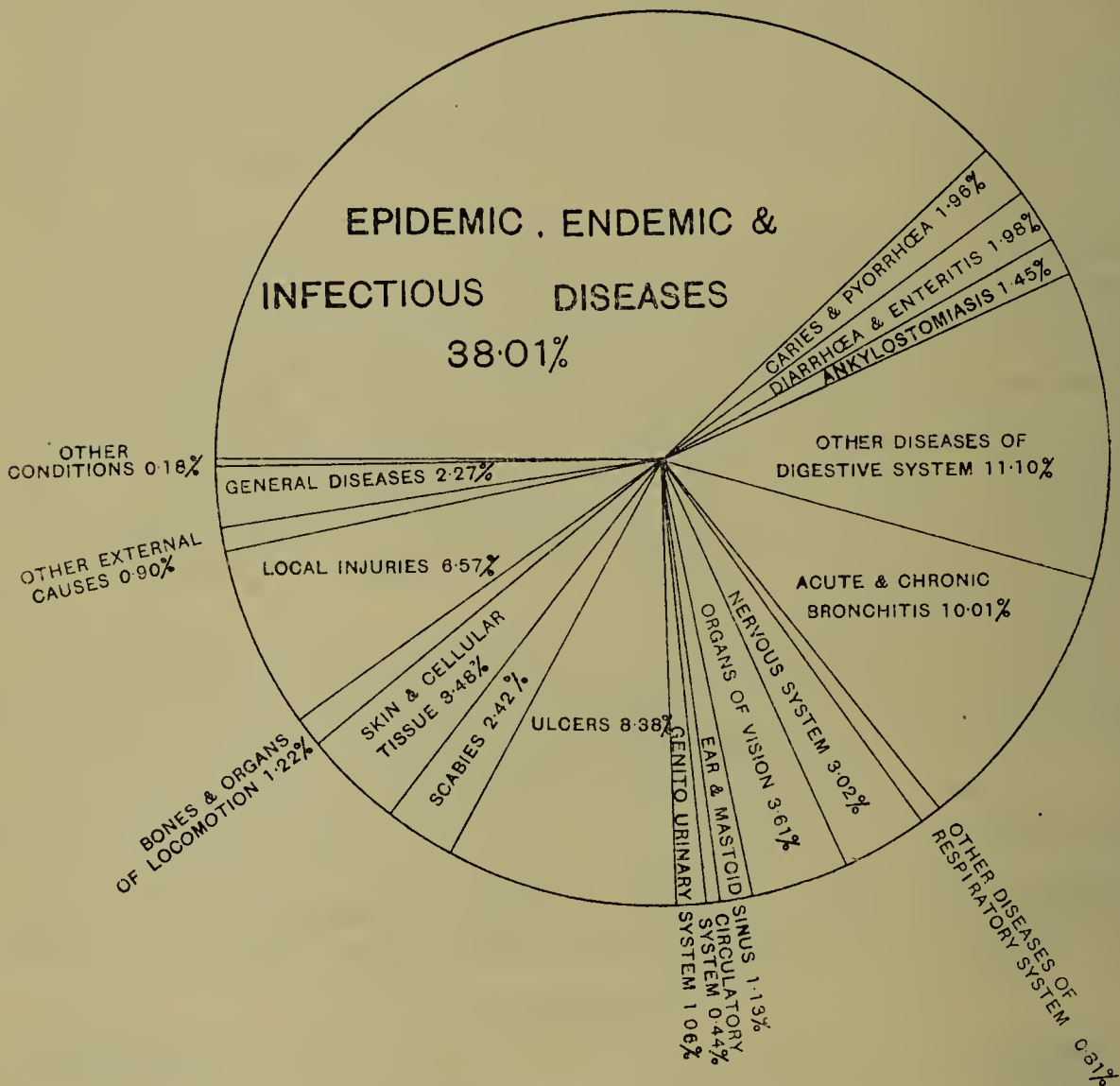
This is the sixth Annual Medical Report of the Medical and Sanitation Department of the Tanganyika Territory. In the Annual Report for 1924 the incidence of disease and mortality was approached more directly from the perspective of preventive medicine and the diagrams introduced were intended to illustrate the text to that effect. The model form which we have been requested to follow has made it necessary to alter somewhat the previous arrangement, and the graphs now used are purposed to meet the subject from both points of view.

(I)—GENERAL DISEASES.

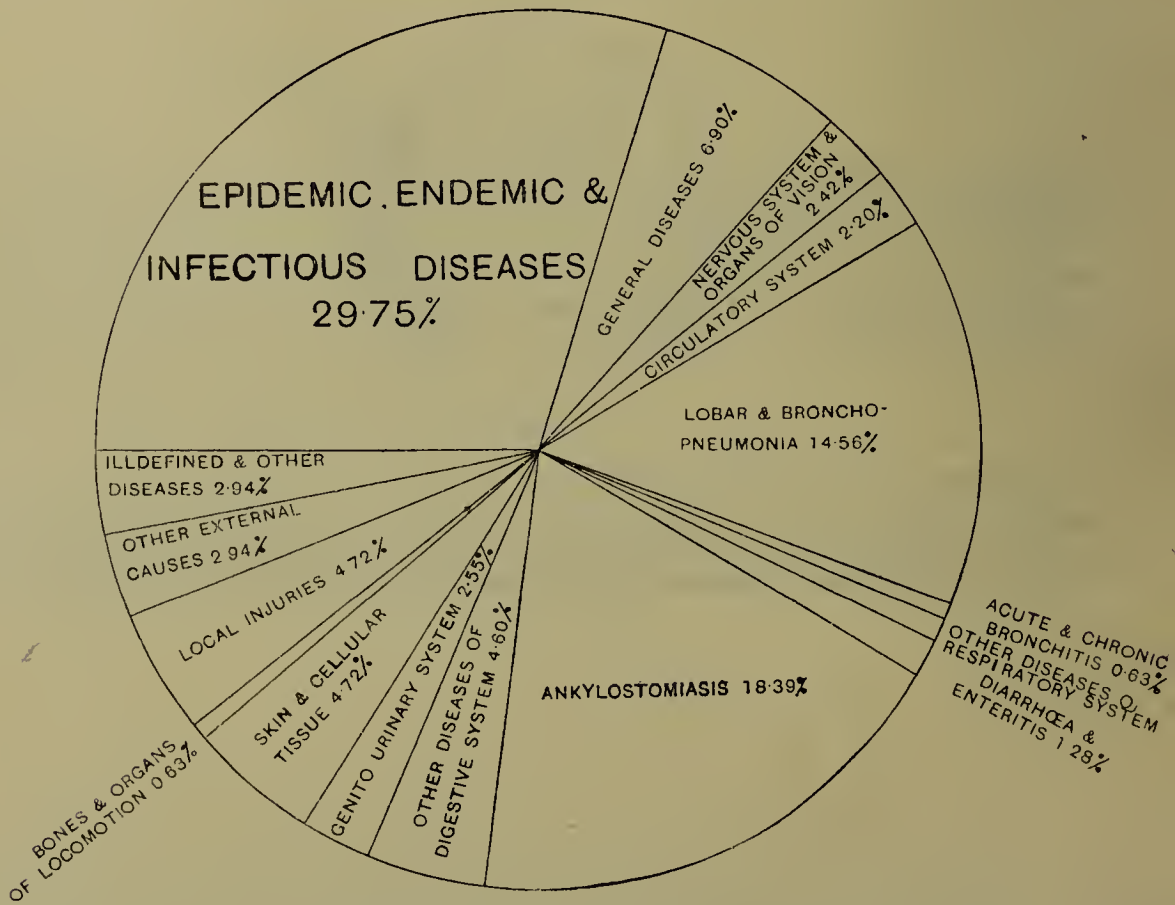
Comparison with the figures contained in the 1924 Report cannot generally be made to any extent owing to the re-arrangement of diseases, under their various headings, being different to the old tables, but the table given immediately below provides such data as are available for comparison. The figures are shown as percentages of cases to total cases and deaths to total deaths.



THE PROPORTION OF EPIDEMIC, ENDEMIC, INFECTIOUS, SYSTEMIC, AND
OTHER DISEASES SHEWN AS PERCENTAGES OF TOTAL CASES TREATED
AT HOSPITALS AND DISPENSARIES.



TOTAL INCIDENCE: 272,373



TOTAL DEATHS: 783

<i>Diseases singly or grouped</i>	1924	1925	
Nervous, Respiratory and Digestive Systems	27.10	30.33	Cases
Skin Diseases	15.84	14.28	„
Of the Skin Diseases—Ulcers represented	63.90	58.04	„
„ „ Scabies „	20.04	17.09	„
Epidemic, Endemic and Infectious Diseases, Diarrhoea, Enteritis, Digestive System and Ankylostomiasis	68.00	54.02	Deaths

TABLE SHEWING TOTAL CASES, PERCENTAGES OF GROUPS TO TOTAL CASES TREATED, DEATHS, AND PERCENTAGE OF DEATHS TO TOTAL NUMBER OF DEATHS.

GROUP	Cases	Percentage to total number of cases treated	Deaths	Percentage of deaths to total number of deaths
Epidemic, Endemic and Infectious Diseases	103,531	38.01	233	29.75
General Diseases	6,194	2.27	54	6.90
Diseases of the Nervous System	8,220	3.02	18	2.12
Diseases of the Organs of Vision	9,823	3.61	1	0.30
Diseases of the Ear and Mastoid Sinus	3,087	1.13	...	...
Diseases of the Circulatory System	1,199	0.44	17	2.20
Acute and Chronic Bronchitis	27,677	10.01	5	0.63
Lobar and Broncho-pneumonia	704	0.17	114	14.56
Other Diseases of the Respiratory System	1,094	0.64	6	0.77
Caries and Pyorrhoea	5,356	1.96	...	...
Diarrhoea and Enteritis	5,401	1.98	30	1.28
Ankylostomiasis	3,963	1.45	124	18.39
Other Diseases of the Digestive System ...	30,201	11.10	36	4.60
Diseases of the Genito-Urinary System	2,884	1.06	20	2.55
Ulcers	22,817	8.38	18	2.30
Scabies	6,599	2.42	...	...
Other Diseases of Skin and Cellular Tissue	9,464	3.48	19	2.42
Diseases of Bones and Organs of Locomotion	3,326	1.22	5	0.63
Local Injuries	17,921	6.57	37	4.72
Other External Causes	2,435	0.90	23	2.94
Undefined and Other Diseases	476	0.18	23	2.94
TOTAL ...	272,373	100.00	783	100.00

The general diseases form a small proportion of the total diseases treated, but in as much as anaemia, malignant diseases and food deficiency diseases are included under that heading the death rate is high.

The primary anaemias are seldom reported, but secondary anaemia must be regarded as widely prevalent—and is of course to be accounted for by the enormous mass of the infective diseases and helminthiasis. Since notice was brought to bear on malignant disease greater care has been devoted to the collection of cases, an account of several of which may be found under the heading “Scientific” on page 97.

Deficiency Diseases.—The grosser manifestations of deficiency diseases are fortunately not prevalent to any extent. Small outbreaks of Beri-Beri and Scurvy occasionally occur amongst the labourers at some of the plantations, but generally the standard of living has been improved and the incidence of the conditions mentioned is becoming more infrequent as time goes on. In my opinion the explanation is to be sought in the automatic adjustment that inevitably takes place when employers are forced to realize by the course of events that it is to their advantage to promote the welfare of their labourers by the provision of well-balanced dietary, improved housing, and sanitation.

The current diet scales which are of three categories are given below.

1. *Approved Diet Scales for Long Term Prisoners:—*

LONG TERM PRISONERS.

Meat with Bones	...	...	...	6 ozs per diem
Maize (whole)	...	...	...	18 ozs. „ „
Beans	...	...	...	6 ozs. „ „
Potatoes	...	...	...	8 ozs. „ „
Ghee	...	...	...	$\frac{1}{2}$ oz. „ „
Salt	...	...	...	$\frac{1}{4}$ oz. „ „
Lemons	...	...	...	2 per week.

1. Above weights are of uncooked foodstuffs.
2. Half a lemon to be issued on Sunday, Tuesday, Thursday and Saturday.
3. Where fish is procurable a ration of fish may be issued three days a week in lieu of meat.
4. Equivalent of potatoes—muhogo, bananas or sugar cane in equal weights.
5. If lemons not procurable—an issue of 8 ozs. green vegetables in lieu of half a lemon. If neither available the issue of beans should be germinated beans.

Relating to the above the following statistics for the four years 1922 to 1925 inclusive, are instructive, and 1925 shews the lowest percentage of deaths to the average and total number of prisoners hitherto obtained.

	1922	1923	1924	1925.
Number of Deaths	51	76	76	59
Daily average number of Prisoners during year	1570.38	1397.50	1736.60	1760.12
Total number of Prisoners during year	6605	7571	9947	9091
Percentage of Deaths to average number of Prisoners	3.65	5.36	4.31	3.30
Percentage of Deaths to total number of Prisoners	0.77	1.00	0.76	0.65

Of the 59 deaths only 9 were due to dysentery, colitis, or diarrhœa. There were 14 deaths due to pneumonia, and 7 to influenza, chiefly at Tabora and Tukuyu; and it is recommended that two blankets be allowed per prisoner during the warmer months and three during the cold season, at all prisons above an altitude of 3,000 ft.

Attention is drawn to the fact that the largest number of deaths at any one prison, namely 11 out of a total of 343 prisoners, took place at Tukuyu where the meat ration had not been strictly adhered to: and that Lindi, a station at which meat has not been available, released one prisoner on account of chronic diarrhœa and inanition, and had 6 deaths out of a total of 334 prisoners as compared with 7 deaths out of 501 at Dar es Salaam, 5 out of 1,065 at Mwanza and 7 out of 611 at Tabora.

In my opinion the adoption of the new ration scale including a daily supply of meat has been amply justified.

2. *Diet Scale for Plantation Labour, i.e. labourers more or less permanently employed for a year or longer.*

Maize or Mtama Meal	...	...	...	20 ozs. per day
Beans	...	...	...	3 ozs. „ „
Salt	...	...	...	$\frac{1}{4}$ oz. „ „
Meat ⁽⁴⁾	3 lbs. per week
Potatoes ⁽¹⁾	4 lbs. „ „
Ground Nuts ⁽²⁾	22 oz. „ „
Sugar	...	...	...	1 lb. „ „
Fresh Vegetables ⁽³⁾	$2\frac{1}{4}$ lb. „ „

- (1) May be replaced by muhogo or bananas.
- (2) May be replaced by animal or vegetable fat, cotton seed, coconut or sim-sim oil.
- (3) May be replaced by lemons, limes, oranges or tomatoes.
- (4) Where fish is available a ration of fish, at the rate of 1 lb. of fish for 1 lb. of meat, may be issued, two days a week, in lieu of meat.

3. *Diet Scale for Unskilled Labour, i.e.*, temporary labour—mostly employed by the Railway and Public Works Department for short periods of time.

Maize or Mtama Meal	...	...	24 ozs. per diem
Meat	...	...	1 lb. twice weekly
Beans	...	...	4 ozs. daily
Ground nuts	...	...	2 ozs. ,,
Fresh Vegetables	...	...	1 lb. weekly
Salt	...	...	2 ozs. ,,

Where fish is available, an equal ration of fish may be issued two days a week in lieu of meat.

The question of vitamin deficiencies or *acompletinoses* is, however, of far wider application, relating as it does to a substantial proportion of the African population. There are extensive areas in which the inhabitants lack seriously the vegetables and foodstuffs requisite for the maintenance of individual well-being, growth, and the survival of the race. It is frequently recorded with regard to Sleeping Sickness that the incidence appeared to be enhanced due to a coincident famine. The Venereal Diseases Medical Officer noted recently that of a large number of cases of Yaws and Syphilis 75% made rapid improvement under treatment, but the remaining 25% did not; and from their condition he inferred that this was due not so much to the tenacity of the diseases but to the undernourished condition of the sufferers, whose entire diet for months if not years had been cassava. It is evident that the population as a whole in the regions occupied by the tsetse fly suffer from a lack of protein. There may be a few goats, sheep and pigs, but certainly no cattle, and our game laws prohibit the African from hunting game animals for food. It is recommended therefore that the game laws be relaxed, and means taken by closer administration, and by the distribution of seeds and cuttings to encourage the planting of vegetables and fruit, particularly tomatoes, as widely as possible. The breeding of sheep, pigs and goats (especially the latter, the milk of which may be utilised for the artificial feeding of infants who have lost their mothers or whose mothers are unable to nourish them) should be insisted upon by active propaganda, and facilities granted for transfers of these forms of stock to fly-infested areas. Financial aid relating to this important subject might with advantage receive consideration.

Nervous and Mental Diseases.—Following on the treatment of Epilepsy by Dr. McNaughton with Bismuth Sodium Tartrate, the Superintendent of the Lunatic Asylum at Lutindi was instructed to try the method. His results are interesting and demonstrate that certain types of mental disorder are ameliorated; but the figures are not yet comprehensive enough for inclusion in this report.

Diseases of the Eye.—Apart from small-pox, syphilis, gonorrhœa, and traumatic agency, the bulk of eye cases consist of conjunctivitis; and this chiefly amongst children. The Welfare Clinics are already doing useful work in this direction. Cataract is fairly common and is found mostly in the sandy-soil, glary, exposed regions of the Territory. The water in most of these parts is scanty and brackish and obtained from surface wells, and calculus of the urinary bladder is not uncommon.

Diseases of the Circulatory System.—Whilst disease of the circulatory system is not perhaps as rare as might be thought from the returns, it certainly is a matter for consideration as to the reason why aneurysm is not as frequent amongst the African population as the European. Syphilis is extensive in some areas and portage must throw a great strain on the heart and aorta, yet few cases of aneurysm are recorded. Personally I have only seen one case in 19 years in an African to four cases in 10 years in Europeans.

Diseases of the Respiratory System.—This is an important group both as regards incidence and mortality. Respiratory affections supply 10.82% of the total cases treated, of which Acute and Chronic Bronchitis account for 10.01% and no less than 14.56% of the total deaths are due to Lobar and Broncho pneumonia. Ill-ventilated, unhygienic dwellings and surroundings, fatigue, lack of nourishing food, scanty clothing and exposure, such as a large number of Africans experience at the higher attitudes,

are the main contributing factors towards this mortality. The question of occupational respiratory conditions in relationship to cotton and sisal ginneries will require examination shortly.

Diseases of the Digestive System.—Except for the Epidemic, Endemic and Infectious diseases, those of the Digestive system return the largest number, 44,921 cases have been recorded, 16.49% of the total cases. Of this figure 5,356 were due to caries and pyorrhœa, 12,844 were cases of constipation probably due to dietetic error or low rations. Diarrhoea and Enteritis gave 5,401 cases, Ankylostomiasis 3,963 and Roundworm 4,048—practically all due to ignorance of hygiene and lack of sanitation.

Diseases of the Skin and Cellular Tissue.—Ulcers play the predominant part under this heading and shew 22,817 cases. Besides trauma, syphilis and yaws are powerful predisposing if not actual causes.

Under *Diseases due to external causes*: 17,921 cases were due to Local Injuries of which 37 died; how far these figures can be correlated with industrial occupation is not known at present.

SURGICAL OPERATIONS, 1925.

BONES, OPERATION :				Brought forward				104	
Skull, fracture of	3	GENITO-URINARY TRACT :							
Fractures, simple	23	Circumcisions	127						
Fractures, compound	12	Curettage of uterus	8						
Operations for reduction of frac-		Cystotomy for calculus	3						
tures.	3	Haematocele	2						
Osteotomy	1	Hydrocele, single, radical cure ...	134						
Osteectomy	8	Haematoma	6						
Resection, others	2	Orchidectomy	5						
Others (unclassified)	7	Penis, Operations on	1						
CHEST, OPERATIONS ON :				Scrotum operations	1				
Breast abscess, incision of ...	2	Vaginal operations	1						
Breast, excision of	2	Urethrotomy, internal	1						
Thoracotomy	3	Urethrotomy, external	2						
LAPAROTOMY :				Others (including unclassified) ...	28				
Abdomen, penetrating wound of	2	HERNIOTOMY :							
Abscess of liver, laparo-hepatotomy	2	Inguinal, single	77						
Appendectomy with local		Strangulated	1						
peritonitis	3	Others (including unclassified) ...	1						
Appendectomy with general peri-		ADENECTOMY :							
tonitis	2	Cervical	4						
Exploratory	1	Femoral	1						
Pan-hysterectomy	1	Inguinal, single	4						
Intestinal obstruction	2	Others (including unclassified) ...	1						
Ovarian cystectomy	1	AMPUTATIONS :							
Paracentesis abdominalis	1	Hand	5						
Others (including unclassified)	5	Arm	13						
OBSTETRICAL :				Leg	16				
Abortions... ..	1	Foot	4						
Births, forceps operations ...	5	Digit	37						
Births, abnormal presentations	1	Penis	1						
Repairs of perineum	6	Thigh	5						
Others (including unclassified) ...	5								
Carried forward				104	Carried forward				593

SURGICAL OPERATIONS 1925—*Contd.*

Brought forward		593	Brought forward		991
JOINTS, OPERATIONS ON :			RECTUM, OPERATIONS ON :		
Arthrectomy 3			MISCELLANEOUS:		
Reduction of dislocation 10			Abscess, treatment of 303		
Others (including unclassified) 13			Cysts 12		
MUSCLES AND TENDONS,			Elephantiasis, treatment of 65		
OPERATIONS ON :			Fistulous tracts 8		
Others (including unclassified) 4			Lumber puncture 3		
EAR, OPERATIONS ON :			Neoplasm, excision of benign 39		
Mastoid operations 2			Neoplasm, excision of malignant 14		
Removal of foreign bodies 2			Plastic operations for congenital		
EYE, OPERATIONS ON :			defects. 1		
Cataract, extraction of 17			Removal of foreign body 2		
Enucleation 8			Skin graft 22		
Lid operations 2			Tooth extractions... .. 499		
Pterygium, transplantation of 1			Ulcers, treatment of 106		
Removal of foreign body 4			Varicose veins, treatment of 1		
Others (including unclassified) 2			Wounds, gunshot 3		
NOSE AND THROAT,			Wounds, others 92		
OPERATIONS ON :			Various other minor operations 1		
Removal of polypi 1			Others (including unclassified) 36		
Tonsillectomy 3			Total		2,198
Tracheotomy 2					
Others (including unclassified) 324					
Carried forward		991			

(II)—COMMUNICABLE DISEASES.

Anthrax.—There were 27 cases, 1 at Arusha and 26 at Singida—both are endemic areas.

Cerebro-Spinal Meningitis.—A total of 8 cases with 4 deaths. This occurred chiefly at Musoma, Mwanza and Tanga, which appear to be endemic foci and supply cases every year.

Chicken-Pox.—308 cases. Small numbers of cases occurred in the Dodoma and Arusha districts throughout the year and from these foci Kondoa-Irangi, Moshi, Tabora and Kigoma were apparently infected during the last quarter.

Dengue.—The irregular incidence of Dengue during the last two years at Dar es Salaam leads one to premise the probability of an intermittent introduction from an outside source and the experience of Dr. Sannemann, the Port Medical Officer at Hamburg, who writes as follows, "Dengue has appeared frequently during the last year, almost exclusively in ships from India. 124 cases were reported and probably many cases labelled influenza should have been included. The cases came from 14 steamers with a total complement of 916, so that about 14 per cent of the crews were affected," suggests that the infective centre for the East African ports might be Bombay. Steps are being taken to investigate this matter.

<i>Diphtheria.</i>	1923	1924	1925
	—	1	—

Dysentery.—See Deputy Director of Sanitary Services report page No. 21.

Encephalitis Lethargica.—Nil.

Enteric Fever.—See Deputy Director of Sanitary Services report page No. 21.

Glanders.—Nil.

Malaria and Blackwater Fever.—Excepting Yaws, Malaria shews the largest return of any other disease. During 1924 there were 22,732 cases as compared with 27,277 during 1925, an increase of 5,455, which may be accounted for by the greater total rainfall, which was abnormally heavy during the latter months of the year, and the increase in population of the larger townships. It is not surprising therefore that the figures for Blackwater Fever have been augmented.

	Cases	Deaths
1921	42	7
1922	47	4
1923	35	7
1924	30	5
1925	52	15

The two stations that demand most attention are Dar es Salaam, 17 cases, and Tabora, 10 cases, where important drainage work is still pending, and which should, if possible, not be longer delayed.

<i>Mumps.</i>	1923	1924	1925
	92	165 with 1 death	46

Plague.—See Deputy Director of Sanitary Services report page No. 24. No cases occurred in the Singida district which might be regarded as satisfactory. It is advocated in view of the persistency of outbreaks at and near Musoma that early measures be taken to protect Mwanza, between which port and Musoma there is regular shipping and dhow traffic. Mwanza, the future terminus of the railway which will link up this potential plague area with Tabora and the Central Line, should be safeguarded and proper rat-proof stores for produce and hides constructed at an early date, otherwise we run a permanent risk of introducing and establishing Plague at some of our most important centres. The Township of Tabora has a population of over 24,000 and the Tabora Province with its activities relating to cotton production lays the whole area prone to almost unlimited extension should plague be introduced. Shipping touching at Mwanza should not be permitted to berth alongside the pier after dark, and before it is sufficiently light in the morning. Mwanza experienced a devastating epidemic not many years ago; it has always presented itself to my mind as the most menacing point in the Territory and I am conscious of a persistent feeling of apprehension as time goes on. To put it plainly it is considered that, until orthodox measures are taken, we are gambling.

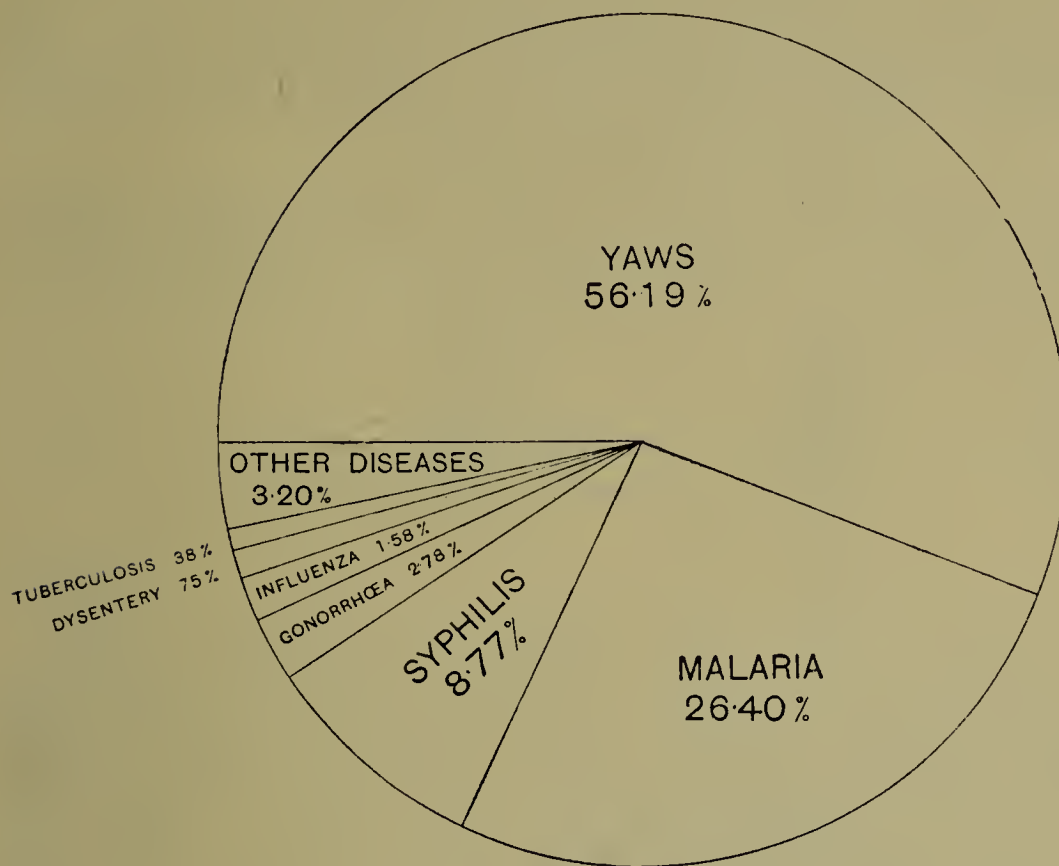
Relapsing Fever.—See Deputy Director of Sanitary Services report page No. 23.

1923	1924	1925
119	148	256 cases

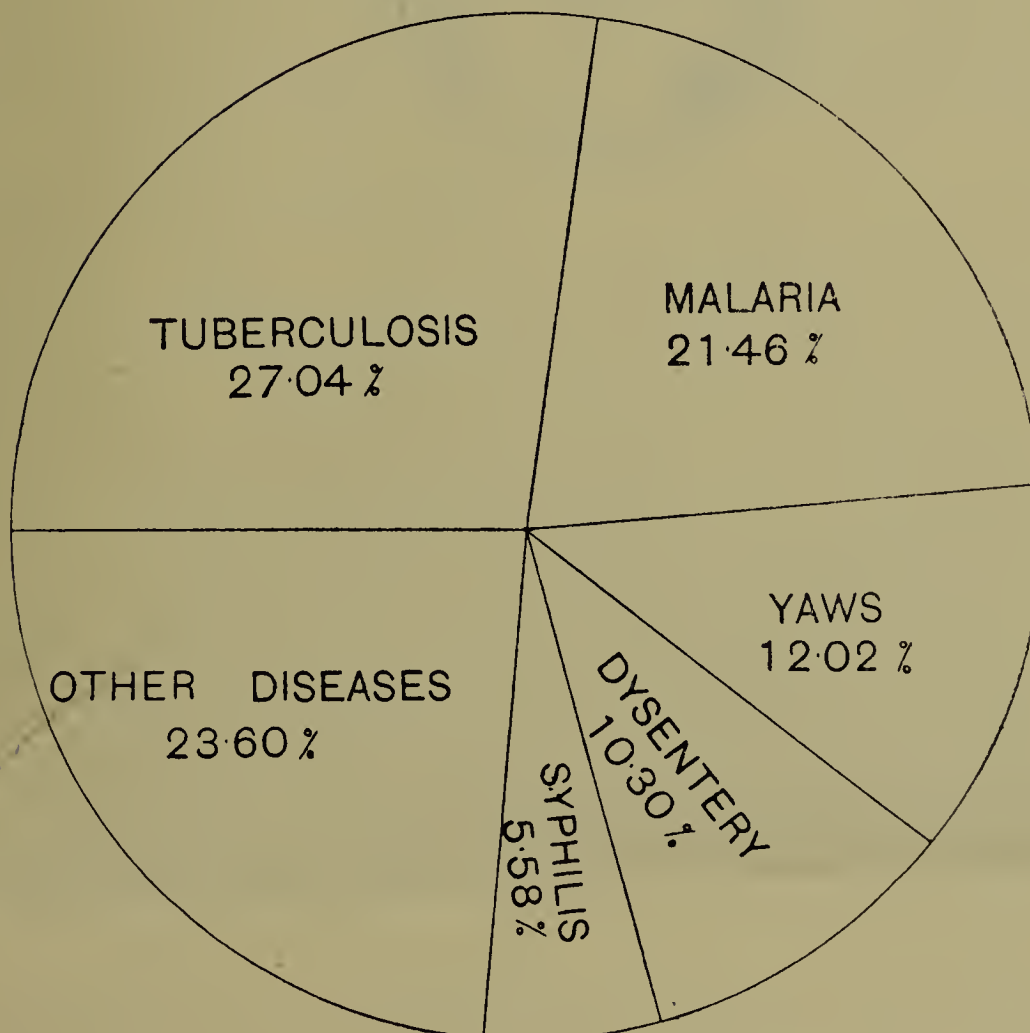
Neosalvarsan and Mercurochrome are available at all the central medical stations, both of which drugs possess specific effect in almost equal degree.

Trypanosomiasis.—See Deputy Director of Sanitary Services report page No. 22. The measures adopted, namely the segregation and the treatment of cases with the latest remedies, the evacuation of natives from thickly infested glossina areas and settlement in open fly-free or cleared country, suitable clearing of bush and scrub

PROPORTION IN PERCENTAGES OF EPIDEMIC, ENDEMIC AND
INFECTIOUS DISEASES, IN AND OUT PATIENTS, TREATED
AT HOSPITALS AND DISPENSARIES.



TOTAL INCIDENCE: 103,531



TOTAL DEATHS. 233



along lines of communication, and the extension of agriculture, which latter it is hoped to expand with the aid of an Agricultural Officer and Inspectors, have begun to bear fruit. In my opinion we have got over the worst of the situation and a definite change for the better should be evident within the next two years.

Tuberculosis. See Deputy Director of Sanitary Services report page 26. The Moshi district still awaits investigation, I have for sometime past formed the impression that Phthisis has a firm hold on the Wachagga, and recent reports have strengthened this view (See also the Annual Medical Report for 1924, page 46).

VENEREAL DISEASES AND YAWS.

Yaws.—The treatment of Yaws with Bismuth Sodium Tartrate has made satisfactory progress.

The following is a comparative statement of cases treated during the last five years.

1921	...	...	1,109
1922	...	...	3,123
1923	...	...	3,616
1924	...	...	20,714
1925	...	...	75,689

Total 104,251

During 1924 there were 34 treatment centres which, including travelling clinics, were expanded to 55 by the end of 1925. Whilst it is evident that Yaws is distributed extensively throughout the Territory there appear to be certain areas in which the density is markedly lower than in others. The coastal districts of Bagamoyo, Pangani and Tanga to the north of Dar es Salaam shew a lower rate than the districts of Utete, Kilwa and Lindi to the south, of which Utete shews the greatest density. There is also an irregularly shaped area comprising the plateau highlands of Iringa, Tabora (north of the Ugalla river) and Dodoma, wherein the incidence is low. Arusha and Mbulu shew a moderate infection rate, Moshi and Usambara somewhat greater, whereas Tukuyu (especially the low lying regions lying between Lake Nyasa and the hills), Mwanza and Bukoba to the east, south and west of Lake Victoria, the region between Bukoba and the northern portion of the Kigoma district and Kahama, the sub-district of Tabora, are heavily infected: also, although to a lesser degree, Kondoa-Irangi and the population in the vicinity of Mkalama.

The population between the shores of Lake Tanganyika and the foothills of the Ufipa Plateau are likewise heavily infected.

Of the total figure of 75,689 cases, 4,688 were treated on our behalf, with Bismuth supplied by us, by Dr. Janet Murray (U.M.C.A. Tanga,) Miss F. Smith (U.M.C.A. Masasi) and Mrs. Draper (L.M.S. Abercorn) to whom my thanks are due. District Officers have been of great assistance but my grateful acknowledgments are more particularly due to Mr. F. J. Bagshawe, Kondoa-Irangi, Mr. Kenny-Dillon, Mkalama, and Mr. C. W. Morgan, Utete, whose personal interest and energies have resulted in large numbers being treated. Indeed, Mr. Morgan on occasion, when the influx of patients has been overwhelming, has himself helped in giving the intramuscular injections. It is estimated that there are yet seven to eight hundred thousand to be treated and concerted effort to have more cases brought in for attention at the different centres in other districts would result in considerable reduction of this scourge. Our present organisation is capable of dealing with approximately 100,000 a year and we hope to work at an accelerated rate during 1926. An appeal is therefore made to those in a position to help to take up this matter seriously and if this is done the elimination of Yaws should be nearly accomplished during the next six years. Evidence is accumulating of the occurrence of paraframbœsial nervous conditions, similar to General Paralysis of the Insane and Tabes Dorsalis, which clear up after a short course of Bismuth in quantity much less than is required for syphilitic lesions.

TABLE OF YAWS AND SYPHILIS CASES TREATED (BY DISTRICTS).

								YAWS	SYPHILIS
ARUSHA	...	...	...	...	...	...	...	959	64
Mbulu	...	...	...	...	...	...	...	192	26
Kibaya	...	...	...	...	...	...	...	20	5
BAGAMOYO	...	...	...	...	...	...	...	796	59
BUKOB	...	...	...	...	...	...	...	115	1,980
,, District	...	...	...	...	...	...	...	6,980	2,562
DAR ES SALAAM	...	...	...	...	...	...	...	4,529	690
Mafia	...	...	...	...	...	...	...	207	3
DODOMA	...	...	...	...	...	...	...	183	67
Manyoni	...	...	...	...	...	...	...	2	1
Singida	...	...	...	...	...	...	...	588	67
IRINGA	...	...	...	...	...	...	...	40	63
KIGOMA	...	...	...	...	...	...	...	920	218
Kasulo	...	...	...	...	...	...	...	271	72
Ujiji	...	...	...	...	...	...	...	491	156
KILWA	...	...	...	...	...	...	...	1,807	97
Kibata	...	...	...	...	...	...	...	120	39
Liwale—Sleeping Sickness Area	...	...	...	...	...	...	...	467	2
KONDOA-IRANGI	...	...	...	...	...	...	...	4,268	57
Mkalama	...	...	...	...	...	...	...	2,112	14
LINDI	...	...	...	...	...	...	...	4,784	28
Mikindani	...	...	...	...	...	...	...	3,799	264
Tunduru	...	...	...	...	...	...	...	61	10
*Masasi	...	...	...	...	...	...	...	2,584	...
LUSHOTO	...	...	...	...	...	...	...	106	116
MAHENGE	...	...	...	...	...	...	...	1,263	69
,, District	...	...	...	...	...	...	...	68	...
MOROGORO	...	...	...	...	...	...	...	694	612
Kilosa	...	...	...	...	...	...	...	547	175
Kisaki	...	...	...	...	...	...	...	121	138
MOSHI	...	...	...	...	...	...	...	3,402	461
,, District	...	...	...	...	...	...	...	32	...
MWANZA	...	...	...	...	...	...	...	2,692	1086
Maswa	...	...	...	...	...	...	...	4	...
Musoma	...	...	...	...	...	...	...	736	1,129
NAMANYERE	...	...	...	...	...	...	...	101	46
Kasanga	...	...	...	...	...	...	...	420	47
*Kasanga	...	...	...	...	...	...	...	1,007	...
PANGANI	...	...	...	...	...	...	...	479	67
Handeni	...	...	...	...	...	...	...	1	16
SONGEA	...	...	...	...	...	...	...	1041	265
TABORA	...	...	...	...	...	...	...	266	241
Nzega	...	...	...	...	...	...	...	360	179
Negezi	...	...	...	...	...	...	...	85	16
Kahama	...	...	...	...	...	...	...	298	47
,, District	...	...	...	...	...	...	...	1,404	85
Shinyanga	...	...	...	...	...	...	...	175	70
TANGA	...	...	...	...	...	...	...	631	267
*Korogwe	...	...	...	...	...	...	...	254	...
*Msalabani	...	...	...	...	...	...	...	843	...
TUKUYU	...	...	...	...	...	...	...	355	83
Mwaya	...	...	...	...	...	...	...	4,548	32
Utete	...	...	...	...	...	...	...	12,781	38
,, District	...	...	...	...	...	...	...	4,680	...
TOTAL								75,689	11,829

*Cases treated on our behalf by Missionary medical staff with Bismuth Sodium Tartrate supplied by us.

Syphilis has hitherto been dealt with on the same lines as in the treatment of Yaws.

It is more resistant to bismuth in the ratio of about 4:1, namely it requires 3 to 4 times the quantity of bismuth for a so-called cure—that is the entire absence of active signs and the general recovery in health of the patient.

In view of the findings reported by Harrison, (see his article in the *British Journal of Venereal Diseases* Vol. II, No. 5, pages 19-29), the almost insuperable difficulty of inducing the African native to undergo prolonged treatment, and taking into account the numbers and distribution of cases over the extensive areas of the Territory, in my opinion we cannot do better than push the bismuth treatment—see also page 11 an annotation from a communication addressed to the Editor of the *Lancet*, on “The Treatment of Yaws and Syphilis in Tropical Africa,” in which the therapeutic effect on syphilis and yaws of a new compound of Bismuth Sodium Tartrate and Soamin is also referred to. The Bukoba—Mwanza area shews the highest incidence. In the former district a special Venereal Diseases Medical Officer and a Senior Sub-Assistant Surgeon were detailed for itinerant treatment. The former, Dr. McNaughton, treated 1698 cases during four months before his departure on leave. Progress still continues as will be observed from the figures given below.

SYPHILIS.

	1921	1922	1923	1924	1925	Total.
Total cases treated ...	1,775	2,145	2,667	4,348	11,829	22,764.

Far from the African concealing infection, treatment with Bismuth, which is voluntary, has now assumed great popularity. Numbers of bedridden people crippled by the ravages of syphilis and yaws are carried fifty miles and more to the clinics.

Gonorrhœa.—On the advice of Dr. Andrew Balfour 50 grammes of Mercurochrome was sent out by the Colonial Office. Prior to this date we had already indented for 400 grammes. Supplies were distributed to Medical Officers and certain of the Sub-Assistant Surgeons for trial, among other diseases, in the chronic complications and sequelæ of this affection.

A circular was also issued detailing the dosage and procedure of treatment with Mercurochrome and Calcium Chloride. Facilities for douching for both male and female patients have been available at all the medical centres for several years.

Venereal inspections of troops, police and followers are conducted periodically.

(b) Vital Statistics.

(1) GENERAL NATIVE POPULATION:

Estimated population for the year—no recent census has taken place, the original figure obtained by the 1921 Census is 4,107,000. No statistics relating to Births, Deaths and Infant Mortality are available.

(2) GENERAL EUROPEAN POPULATION:

Acknowledgment is made to the Registrar-General of Births and Deaths for a return of the registered deaths which are summarised as follows:—

Puerperal Septicaemia and					
Pneumonia	2	Gunshot wound—accidental ...	1		
Malaria	6	Influenza	1		
Blackwater Fever	7	Diarrhœa and Vomiting ...	1		
Teething	1	Illness unknown	1		
Labour at Term—Embolism ...	1	Heart failure	1		
Cerebral Embolism	1	Drowning—accidental ...	1		
Encephalitis	1	Alcoholism—heart failure ...	1		
Cancer	2	Pneumonia	3		
Pneumonia	1	Whooping Cough—Broncho-			
Asthma	1	pneumonia	1		
		'Amyotrophic Lateral Sclerosis	1		

The deaths due to Malaria occurred at Arusha, Iringa, Lindi, Mahenge, Morogoro and Rungwe. Of the seven cases of Blackwater Fever, 1 occurred at Iringa, 3 among the Fathers at a Mission near Mahenge, 2 at Morogoro and 1 on the Rufiji Delta.

(3) EUROPEAN OFFICIALS :

Deaths.—There were 6 deaths among European Officials, all of them being due to disease.

	1923	1924	1925
Malaria	1	1	1
Blackwater Fever	2	—	1
Pyrexia of uncertain origin	1	—	—
Appendicitis	1	—	—
Carcinoma	1	—	—
Accidental	—	2	—
Enteric	—	1	—
Double pneumonia	—	—	1
Heart failure supervening on appendicitis	—	—	1
Heart failure	—	—	1
Acute pyæmia	—	—	1
TOTAL ...	6	4	6

The cases of Malaria and Blackwater Fever were unfortunate. The former occurred at a long distance from the headquarters station Mahenge, and although the Medical Officer made a great effort to get to the patient at Mkasu his services were of no avail. Mkasu, which is situated upon a small hill practically surrounded on all sides by swamps, and becomes an island during the rainy season, has been abandoned. The Blackwater case occurred while the official was on tour in the Mikindani area. The Medical Officer, Lindi, was early on the scene but there appeared to be little hope from the beginning.

Invalidings.—13 European Officials were invalided during the year, as compared with 7 and 14 during the two preceding years :

	1923	1924	1925
Enteric fever	1	—	—
Dysentery (amoebic)	2	—	—
Malaria	1	1	—
Blackwater fever	1	1	—
Tuberculosis (pulmonary)	2	1	—
General debility	1	—	—
Neurasthenia	4	1	4
Delusional insanity	1	—	1
Exophthalmic goitre	1	—	—
Paralysis agitans	—	1	—
V. D. H.	—	1	—
Fracture of patella and septic knee joint	—	1	—
Intra-ocular haemorrhage	—	—	1
Delusions	—	—	2
Injury to leg (gunshot wound)	—	—	1
Tabes dorsalis	—	—	1
Melancholia	—	—	1
Symptoms pointing to renal calculus	—	—	1
Chronic recurring appendicitis	—	—	1
TOTAL ...	14	7	13

Of the invalidings 9 out of 13 were due to nervous conditions, of which there were three definite cases of insanity, which cases and the gunshot wound are responsible for the increase in the total number of days, and the average daily number, on the sick list. As regards the mental cases considerable delay took place in getting them home, chiefly attributable to the shipping authorities declining to accept them as passengers.

(4) ASIATIC OFFICIALS :

There were 11 deaths during 1925, as compared with 9 and 4 during 1923 and 1924 respectively, of which 5 were due to Blackwater Fever.

<i>Deaths.</i>	1923	1924	1925
Malaria	1	—	—
Blackwater fever	1	1	5
Pneumonia	1	1	1
Septicaemia	1	1	—
Smallpox	1	—	—
Tuberculosis	2	—	—
Fatty degeneration of heart	1	—	1
Alcoholism (acute)	1	—	—
Heart failure	—	1	—
Acute general peritonitis supervening on appendicitis	—	—	1
Tuberculous meningitis	—	—	1
Asthma and bronchitis	—	—	1
Typhoid fever	—	—	1
TOTAL ...	9	4	11

Invalidings.—8 Asiatic Officials were invalided during the year:—

	1923	1924	1925
Malaria	—	1	—
Tuberculosis	4	—	—
Pernicious anaemia	1	—	—
Diabetes	—	1	—
Hemiplegia	1	1	—
Paralysis	—	1	—
Neurasthenia	2	1	1
Chronic bronchitis	1	—	—
Physically unfit	—	1	—
Syphilis	—	1	—
Blackwater Fever	—	—	1
Heart disease	—	—	2
Pulmonary tuberculosis	—	—	1
Chronic bronchitis and emphysema	—	—	1
Anaemia, debility and chronic bronchitis	—	—	1
Chronic gastric ulcer	—	—	1
TOTAL ...	9	7	8

There has been no increase in the invaliding rate and no outstanding feature calling for comment.

TABLE I.
SICK, INVALIDING, AND DEATH RATES, EUROPEAN OFFICIALS, 1923, 1924 AND 1925.
(For the three Principal Towns and the Whole Territory).

	Dar es Salaam			Tabora			Tanga			Whole Territory		
	1923	1924	1925	1923	1924	1925	1923	1924	1925	1923	1924†	1925
1. Total number of Officials Resident...	349	343	370	78	72	104	138	51	50	800*	861	855
2. Average number Resident ...	229	232	247	47	72	57	51.14	51	50	600*	594	618
3. Total number on Sick List ...	280	358	251	32	50	63	44	36	63	543	646	646
4. Total number of days on Sick List...	1,969	2,795	2,156	265	317	418	221	229	512	3,535†	4,584	4,750
5. Average daily number on Sick List...	5.39	7.66	5.90	0.72	0.87	1.14	0.605	0.63	1.40	9.68†	12.56	13.01
6. Percentage of Sick to average number Resident ...	2.35	3.30	2.39	1.53	1.21	2.00	1.18	1.24	2.80	1.61	2.11	2.10
7. Average number of days on Sick List for each Patient ...	7.03	7.81	8.59	8.28	6.34	6.63	5.02	6.36	8.13	6.51	7.10	7.35
8. Average Sick Time to each Resident ...	8.60	12.05	8.73	5.64	4.40	7.33	4.32	4.49	10.24	5.89	7.72	7.68
9. Total Number Invalided ...	7	6	9	...	...	...	1	1	2	14	7	13
10. Percentage of Invalidings to total Residents	2.01	1.75	2.43	...	...	...	0.72	1.96	4.00	1.75	0.81	1.52
11. Total Deaths ...	1	1	1	1	1	1	...	...	1	6	4	6
12. Percentage of Deaths to total Residents. ...	0.29	0.29	0.27	1.28	1.39	0.96	...	...	2.00	0.75	0.46	0.70
13. Percentage of Deaths to average number Resident ...	0.44	0.43	0.40	2.13	1.39	1.75	...	...	2.00	1.00	0.67	0.97
14. Number of Cases of Sickness contracted away from Residence. ...	...	...	...	3	...	...	...	...	...	16	20	29

* Approximate only—accurate figures not available.
† From 21 Stations shown in Table I in the 1923 Annual Report.
‡ “Whole Territory” implying those Stations from which reliable returns were received *i.e.* Districts shown in Table XIV in the 1924 Annual Report.

TABLE II.

SICK, INVALIDING, AND DEATH RATES, ASIATIC OFFICIALS, 1923, 1924 AND 1925.
(For the three Principal Towns and the Whole Territory).

	Dar es Salaam			Tabora			Tanga			Whole Territory		
	1923	1924	1925	1923	1924	1925	1923	1924	1925	1923†	1924†	1925
1. Total number of Officials Resident...	598	707	701	153	139	267	115	92	94	1000*	1250*	1427*
2. Average number Resident ...	472	585	540	116	139	154	90.14	92	94	877.5*	1011*	1037*
3. Total number on Sick List ...	1040	1377	1616	112	341	541	229	123	171	1807	2189	2776
4. Total number of days on Sick List...	3167	3239	4939	1638	1420	2015	1465	538	1005	8190	7140	10,017
5. Average daily number on Sick List...	8.68	8.87	13.53	4.49	3.89	5.52	4.01	1.47	2.75	22.44	19.56	27.44
6. Percentage of Sick to average number Resident. ...	1.84	1.52	2.51	3.9	2.79	3.58	4.45	1.60	2.93	2.55	1.93	2.64
7. Average number of days on Sick List for each Patient ...	3.05	2.35	3.06	14.6	4.16	3.72	6.35	4.37	5.88	4.53	3.26	3.60
8. Average Sick Time to each Resident ...	6.71	5.54	9.15	14.0	10.22	13.08	12.74	5.84	10.69	9.33	7.06	9.66
9. Total number Invalided ...	4	3	6	2	2	...	2	1	2	9	7	8
10. Percentage of Invalidings to total Residents	0.67	0.42	0.86	1.7	1.4	...	1.74	1.08	2.13	0.9	0.56	0.56
11. Total Deaths ...	1	2	5	2	...	5	2	1	1	9	4	11
12. Percentage of Deaths to total Residents ..	0.17	0.28	0.71	1.30	...	1.87	1.74	1.08	1.06	0.9	0.32	0.77
13. Percentage of Deaths to average number Resident ...	0.21	0.34	0.93	1.72	...	3.25	2.22	1.08	1.06	1.02	0.40	1.06
14. Number of Cases of Sickness contracted away from Residence ...	...	...	...	...	...	...	...	...	...	...	11	17

*Approximate only—accurate figures not available.
†Returns from Mahenge not available for 1923.
‡“Whole Territory” implying those Stations from which reliable returns were received, i.e. Districts shown in Table XIV in the 1924 Annual Report.

TABLE IV.
SHOWING MORBIDITY RATES FOR MALARIA AND BLACKWATER FEVER AMONGST OFFICIALS, TANGA.

EUROPEAN OFFICIALS.										ASIATIC OFFICIALS.										
			Total days off duty.			Days off duty for Malaria.			Days off duty for B.W. Fever.			Total days off duty.			Days off duty for Malaria.			Days off duty for B.W. Fever.		
			1923	1924	1925	1923	1924	1925	1923	1924	1925	1923	1924	1925	1923	1924	1925	1923	1924	1925
January ...	...	...	7	16	85	...	8	26	...	...	...	98	84	160	76	31	63	...	...	...
February ...	...	...	21	4	41	...	4	9	...	...	...	95	89	86	54	35	53	...	...	...
March ...	...	...	35	18	60	...	...	33	...	...	...	175	89	91	84	32	44	...	...	...
April ...	...	...	5	10	41	2	10	...	...	...	...	78	48	62	45	31	59	...	...	...
May ...	...	...	25	31	21	13	4	4	...	...	...	130	21	23	96	9	16	...	...	...
June ...	...	...	40	33	42	32	...	8	...	...	...	174	61	97	92	50	40	...	...	...
July ...	...	...	19	30	52	13	12	...	...	...	...	185	125	71	129	40	25	...	...	...
August ...	...	...	6	32	55	3	1	...	...	...	...	99	33	86	61	9	34	...	...	...
September ...	...	...	15	4	40	2	4	...	...	...	...	123	30	52	44	18	20	...	...	...
October ...	...	...	20	31	15	13	...	...	...	...	...	101	25	103	40	10	34	...	...	...
November ...	...	...	7	16	28	1	4	17	...	...	...	113	2	52	12	2	20	...	...	...
December ...	...	...	20	3	32	10	...	19	...	...	...	91	58	133	11	18	44	...	...	2*
TOTAL			220	228	512	89	47	116	...	...	...	1,462	665	1,016	744	285	452	...	...	2

Percentage of days off duty for Malaria and Blackwater
Fever to total days off duty, 1923 ... 40.45
do. 1924 ... 20.61
do. 1925 ... 22.65

Percentage of days off duty for Malaria and Blackwater
Fever to total days off duty, 1923 ... 50.89
do. 1924 ... 42.86
do. 1925 ... 44.68
*Remaining in Hospital.

Recommendations.

The Medical Staff should be strengthened in order to allow, to begin with, of two additional Officers, Assistant Directors of Medical Services, at the headquarters office. The routine duties are increasing at a rate which will detract from organising and bringing to maturity schemes several of which are pending.

2. More Medical Officers are required so that the greater proportion of the Senior Medical Officers' time may be released for administrative duties—in other words a provincial system is inevitable.

3. An Officer for Maternity and Child Welfare Work and Schools is required for organising those important branches.

4. A Sanitation Officer is required for the Central Railway, and apart from the supervision of the general sanitation of the stations this appointment is of importance from the point of view of plague prevention, inspection of labour camps and plantations, and tsetse bush clearing at the more thickly infested sections of the line.

5. More European Sanitary Superintendents are required for the larger townships which are steadily increasing in size and at which more advanced sanitation is necessary; and for supervising the duties of the African District Sanitary Inspectors.

6. The improvement of water supplies, drainage generally, and, particularly, in connection with anti-malarial work, should be determinedly pursued.

7. The Vaccine Laboratory at Mpwapwa should be started at as early a date as possible. A young unprotected population is rapidly growing and we must get in first.

SECTION III.—HYGIENE AND SANITATION.

REPORT BY THE DEPUTY DIRECTOR OF SANITARY SERVICES ON THE HYGIENE AND SANITATION OF THE TERRITORY DURING 1925.

(A) General Review of work done and progress made.

A distinct improvement in the organisation of the Public Health Service of the Territory has taken place during the year under review. The increase in the staff of the Medical Department has enabled the Director of Medical and Sanitary Services to second three more Medical Officers to act as Sanitation Officers. At the end of 1925 Sanitation Officers were stationed at Dar es Salaam, Tanga, Tabora, Mwanza and Lindi, and although much remains to be done considerable improvement in the Sanitation of these towns can be reported. Five additional Sanitary Superintendents arrived in the Territory during the year; on December 31st 10 were present in the Territory while 2 were on leave. A commencement has been made in the recruiting and training of African District Sanitary Inspectors; further details of this work are given in Sub-section (C) Training of Sanitary Personnel. Maternity and Child Welfare work has been extended, particulars are given in Section V of the report by the Director of Medical and Sanitary Services. The newly appointed Sanitary Engineer arrived in the Territory early in 1926, a Medical Entomologist has been selected and the appointment of these Officers should result in anti-malarial work being done in a more scientific and precise manner in the future than has been possible in the past.

(1) *Preventive Measures.*—Mosquito and insect-borne diseases:—

Malaria: Malaria in its different forms continues to provide the largest number of cases attending Government Hospitals. The number of native patients seen in any year cannot be taken as an index of the malarial incidence during that period. The personality of the individual Medical Officer, the degree of intelligence of the local inhabitants and the spread of education resulting in the appreciation of the value of European medicines are all factors which have to be taken into account.

Few conclusions can be drawn even from the number of European patients; the last census was taken in 1921 and while it is certain that there has been a very great increase in the European population since that date accurate figures are not available. The majority of European non-officials, especially if living at any distance from a Government Station would certainly not call in a medical officer to treat an uncomplicated case of Malaria. 22,277 cases of all classes were treated in Government Hospitals during the year of whom 4,234 were admitted as in-patients. The deaths numbered 35, a mortality rate of 0.8 per cent. No major antimalarial measures were carried out during the year but a most satisfactory increase in the routine work done by the different Health Offices to eradicate mosquito breeding places can be recorded. In some stations the number of inspections made by Sanitary Inspectors have increased by as much as 100%. As in most tropical countries there are considerable numbers of the urban population of the townships in the Territory who do little or nothing to prevent mosquito breeding on their premises, heavier fines are needed to convince habitual offenders of the errors of their ways.

Blackwater Fever.—52 cases were treated during the year with 15 deaths. Reports of these cases are rendered separately.

Trypanosomiasis.—The increase in the European personnel of the Medical Department sanctioned during 1925 has made it possible to extend the investigations into the incidence of Human Trypanosomiasis throughout the Territory. During the greater part of the year six Medical Officers were employed exclusively on Sleeping Sickness work; the results of their investigations confirm the opinion expressed in previous Annual Reports that numerous foci of infection would be found in the *morsitans* infested areas of the Territory.

Cases of the Rhodesian form of Sleeping Sickness have been found during 1925 in the following areas of the Territory:—

- (a) In the neighbourhood of the Maswa sub-district of Mwanza where the first outbreak was discovered in 1922.
- (b) Near Ikoma 50 miles north-east of (a). There is considerable inter-communication between the natives of these two areas. Tsetse fly occur near the Ikoma infected villages but from the reports received it appears that the natives do not live in intimate contact with the fly except when engaged in hunting or fishing. It is probable that at least some of the cases were infected when visiting the Mwanza area. The Assistant Bacteriologist is at present investigating this outbreak.
- (c) In the Liwale sub-district of Kilwa situated in the south-eastern portion of the Territory. This appears to be a localised outbreak of low virulence.
- (d) In the southern portion of the Tabora area and the northern part of Ufipa. Cases of Sleeping Sickness were detected in this area at the end of 1924 (page 139, Annual Report, 1924). Investigations have been continued throughout the year and it appears that approximately 15,000 square miles of country are infected. The type of disease is similar to that described in Nyasaland and by Kinghorn in Northern Rhodesia, cases being found in villages widely separated and as a general rule only a small proportion of the inhabitants are infected. Occasionally the disease becomes epidemic in a localised community; when this is so it appears probable that some concomitant cause is present such as marked shortage of food which not only results in lowered vitality but also in increased contact with the fly due to more frequent and prolonged visits to the forest for the purpose of hunting, fishing or in search of food.

Preventive measures have, in the main, been confined to treatment of infected cases and the concentration of the population in fly-free clearings or outside the forest altogether.

Treatment has been principally by Bayer "205" and Tryparsamide. The former has proved very effective in early cases when given in adequate dosage while Tryparsamide gives better results in cases with obvious involvement of the nervous system. The following is a summary of the cases and deaths in the different infected areas. Fuller details are given in Appendices.

					Cases	Deaths
Liwale	...	...	...	...	78	21
Maswa	...	...	...	...	120	14
Tabora	...	...	...	...	99	16
Ufipa	...	...	...	...	154	78
Ikoma	...	...	...	...	—	32

A few cases of Sleeping Sickness occurred on the shores of Lake Tanganyika, near Kigoma, where *G. palpalis* are numerous; fourteen cases were detected during 1925; several of these were either natives of the Congo or had recently visited the infected areas situated in Belgian Territory. The Medical Officer at Kigoma has made several journeys along the lake littoral examining the inhabitants of the villages, on or near the shore. Very few cases have been found and at the present time there does not appear to be any serious focus of infection in this neighbourhood. An additional Medical Officer has recently been stationed at Kasanga near the southern end of the lake and it will be possible during 1926 to carry out more detailed examination of the inhabitants of the southern shores of Lake Tanganyika.

While Trypanosomiasis of the Rhodesian type shows no signs at present of becoming pandemic in the areas known to be infected, the problem has become sufficiently large to require the creation of a distinct branch of the Medical Department to deal exclusively with Trypanosomiasis. Sanction has been obtained to do this and from 1st April, 1926, Dr. Maclean, with the title of Sleeping Sickness Officer, will be in charge of Sleeping Sickness investigations, his staff being recruited from those members of the Medical Department who show special aptitude for work of this nature.

Relapsing Fever.—*Ornithodoros Moubata* is widespread throughout the Territory, and Relapsing Fever is common in certain districts, particularly Tabora, Tukuyu and on the Kilosa-Iringa main road. There is very considerable native traffic along this route and in addition many Europeans proceeding from the Central Railway to the Lupa goldfields have become infected on this road. In some cases there has undoubtedly been gross carelessness and neglect of the most elementary precautions to prevent infection but experienced travellers who have taken every care have also acquired the disease. Circulars have been issued detailing the precautions to be taken and an advertisement published advising travellers to use an alternative route. The killing-off of the ticks appears to present insuperable difficulties; ticks have been thoroughly soaked in Cresol but when dried in the sun walk away apparently none the worse. An attempt is being made to provide tick-free camping grounds; areas are being cleared and hoed, the grass being then burnt on the ground, the cleared area is beaten hard and enclosed with fencing, no buildings of any kind being allowed within the fence. Small areas within the fence are then selected as sites for tents. The soil is loosened, thoroughly mixed with heavy oil, and again beaten hard. Sufficient time has not yet elapsed to determine whether this experiment will be attended with any success.

259 cases of Relapsing Fever were treated in Government Hospitals during the year. The largest numbers being Tukuyu 70, Tabora 63 and Iringa 41, the remaining cases being treated in fifteen different hospitals throughout the Territory.

Yellow Fever.—No cases have been recorded and so far as is known, this disease does not occur in the Territory.

Filariasis.—43 cases are recorded as having been treated during the year; in addition a total of 331 patients with elephantiasis attended hospital, of these all except twenty were suffering from elephantiasis of the leg or scrotum.

Dengue.—The increase in the incidence of Dengue in Dar es Salaam mentioned in previous annual reports has continued during 1925. Of 71 cases reported 69 occurred in Dar es Salaam. The figures for the last four years for the European Hospital, Dar es Salaam, are as follows: 1922, nil; 1923, 9; 1924, 30; 1925, 62. It is probable that a proportion of this increase is due to improved diagnosis but there can be no doubt that dengue is becoming increasingly common in Dar es Salaam. *Aedes* larvae form the majority of the collections made by the mosquito brigade at Dar es Salaam; of 3,932 collections made during 1925, 1,677 were *aedes*, a percentage of 42.7. In previous years no differentiation has been made of the species of *aedes* present in the larval collections found at Dar es Salaam but during 1926, an attempt will be made to ascertain the relative proportion of *aedes aegypti*.

EPIDEMIC DISEASES. (See Tables pages 28 and 29).

Plague.—Cases of plague were reported from two districts during the year. 39 cases with 22 deaths occurred in the Musoma sub-district of Mwanza situated on the shores of Lake Victoria. It appears probable that infection is brought to Musoma from time to time by hides and other merchandise from the Shirati endemic area near the Kenya border. Arrangements were made early in the year for temporary stores to be erected outside the small township of Musoma thus preventing the introduction of possibly infected articles into the shops and dwelling houses in the bazaar. Since this precaution has been adopted no further cases have been reported. Five fatal cases of plague were reported from the Mbulu sub-district of Arusha but these were not confirmed by any microscopical examination. Considerable difficulty arises in the more remote districts owing to the natives being apparently quite unable to distinguish between anthrax and plague; twice during the year Medical Officers were able to visit villages reported by natives as plague infected and on both occasions it was found that the deaths were due to Anthrax.

Small-pox.—With the exception of one serious outbreak of small-pox the position has been satisfactory throughout the year. Small-pox was present in eight districts of the Territory but in seven of these prompt and efficient measures prevented the spread of the disease; only 26 cases with five deaths occurred. The eighth outbreak was a serious one. According to native information the origin of the epidemic was as follows. Early in March a Kenya native crossed the Tanganyika border near Kilimanjaro and slept on three successive nights in different villages, he then disappeared and has not been traced. He was a native of the Teita district where small-pox was present during March; shortly after his visit small-pox broke out in the three villages where he had stayed. The affected area is about fifty miles from Moshi and is situated on the eastern slopes of Kilimanjaro and the mode of life of the inhabitants favours the spread of any infectious disease. The Medical Officer, Moshi, visited the district in the first week in April and instituted quarantine regulations and a vaccination campaign.

The chiefs of the affected area gave every assistance and imposed strict quarantine there was, undoubtedly, however, considerable concealment of cases by the peasants and by June the disease had become epidemic. The effect of the vaccination campaign now became apparent and the disease rapidly died down, the last cases being reported in September; no more cases occurred during the remainder of the year. 1362 cases with 461 deaths were notified during the whole outbreak. The efficiency of the quarantine imposed is proved by the fact that the disease was confined to the original area infected. Over 50,000 vaccinations were performed, the majority under the supervision of a European Sanitary Superintendent who was seconded for duty in the infected district.

261,050 doses of vaccine were issued by the Director of the Laboratory during the year. The following table shows the results that have been reported from the various districts during 1925.

TABLE OF VACCINATIONS PERFORMED DURING THE YEAR.

District.	Number vaccinated.	Successful.	Modified.	Failed.	Not seen again.
NORTHERN AREA.					
Bukoba	879	...	...	...	879
Mwanza	8,060	5,409	1,454	1,197	...
Arusha	12,152	8,070	177	3,235	670
Usambara... ..	10,081	3,498	2,542	2,478	1,563
Moshi	58,800	38,808	5,902	8,889	5,201
CENTRAL AREA.					
Tabora	33,082	18,268	2,616	2,294	9,904
Dodoma	14,554	9,944	9	1,595	3,006
Kondoa-Irangi	1,542	720	202	620	...
Morogoro	5,214	2,095	1,142	1,963	14
SOUTHERN AREA.					
Iringa	13,600	5,667	4,429	2,534	970
Mahenge	1,400	740	306	354	...
Songea	1,500	1,120	229	151	...
WESTERN AREA.					
Kigoma	2,586	474	40	190	1,882
Ufipa	1,944	500	130	1,198	116
Rungwe	5,015	2,726	1,618	...	671
COASTAL AREA.					
Tanga	4,453	487	493	398	3,075
Pangani	2,400	1,980	113	154	153
Bagamoyo... ..	5,590	2,937	1,334	1,137	182
Dar es Salaam	15,329	422	135	420	14,352
Rufiji	5,100	2,998	578	506	1,018
Kilwa	3,918	2,078	...	853	987
Lindi	2,079	827	547	437	268
Mafia Island ... ..	...	...	...	...	...
TOTAL	209,278	109,768	23,996	30,603	44,911

Cholera.—No cases reported. So far as is known this disease does not occur in the Territory.

Dysentery.—(Amoebic and Bacillary). The numbers of cases of dysentery treated in Government Hospitals during 1925 are as follows:—

	Cases	Deaths
Unclassified	136	6
Amoebic	347	15
Bacillary	295	3

A considerable number of these patients are reported from hospitals in the neighbourhood of the larger plantations. Enteritis is common amongst labourers from a distance who are frequently given rations to which they are not accustomed in their own villages, and it is probable that a proportion of the cases diagnosed as dysentery should be classified as enteritis due to unsuitable diet.

Enteric Group.—28 cases with two deaths were reported from eleven stations in the Territory. The largest figures were Tanga 8, Tabora 5, and Dar es Salaam 3. The Tanga cases were composed of two Europeans and 6 non-Europeans, no deaths occurred. At Tabora one European was infected within the Township area while one Asiatic Official and 3 King's African Rifles Askari acquired the disease while

away from the station; the Asiatic case died. After considerable propaganda by the Sanitation Officer several Europeans and a large number of Asiatics expressed their willingness to be inoculated and this was done early in 1926. One European and two non-Europeans were treated at the European Hospital at Dar es Salaam; all recovered from the disease.

Tuberculosis.—There is little progress to be reported in the campaign against Tuberculosis. At Dar es Salaam and Tanga accommodation has been found at the Infectious Diseases Hospitals for a certain number of advanced cases of pulmonary tuberculosis. The patients are nearly all natives as the accommodation provided is unsuitable for Asiatics.

In the towns the prevention of tuberculosis is intimately connected with the housing problem. In the Asiatic houses of the bazaars living rooms are almost invariably dark and badly ventilated while over-crowding is accentuated by storing merchandise in passages and living rooms. Should one of the inmates be suffering from active pulmonary tuberculosis the habit of indiscriminate expectoration must increase the probability of the spread of infection to other members of the family. In the native quarters newly-erected houses are almost all of one type; at Dar es Salaam the native houses are built of mud and wattle with palm thatch roofs, they are very well constructed, properly spaced and with adequate ventilation. The majority are five-roomed, the cost of erection being approximately £70. It is obvious that few natives can afford to be the sole tenants of a house of this type. The result is that the owner and his family occupy one or two rooms while the remainder are let to house boys and other natives employed in the town and consequently close association of casual acquaintances is likely to occur. The tenant of a room cannot leave his door and windows open whilst away at work owing to the danger of theft, and consequently dwellings are not properly aired during the day.

There is no doubt that the incidence of Tuberculosis is increasing in the Coastal towns and that at present little can be done to prevent the spread of the disease. The provision of Sanatoria, where patients suffering from active tuberculosis could be voluntarily segregated, would be costly and probably ineffective as natives will not willingly submit to prolonged courses of treatment. Compulsory segregation of the breadwinner of a family might entail the provision of Government support for the dependents. Recent correspondence in the English Medical Press emphasises the difficulty of making a correct diagnosis in early cases of pulmonary tuberculosis and the difficulty is certainly not lessened in this Territory where a second opinion can be obtained only in the largest towns and where laboratory facilities are frequently not available.

It is however necessary that some steps should be taken to initiate a definite campaign against the disease. Provision will be asked for in the draft estimates for 1927-28 for a sum of money to start small experimental tuberculosis colonies near Dar es Salaam, Tanga and Moshi; these will be village colonies and if they are found to be successful can be extended in future years.

(See Table of Incidence page 27).

Influenza.—Epidemic Influenza did not assume serious proportions during 1925. The most severe outbreak was in the Moshi district from which 484 cases with 37 deaths were reported.

TABLE SHOWING INCIDENCE OF TUBERCULOSIS AT THE VARIOUS STATIONS IN THE
TERRITORY DURING 1923, 1924 AND 1925.

	1923		1924				1925			
	All Forms		Pulmonary		All Other Forms		Pulmonary		All Other Forms	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Arusha	5	...	4	3	3	2	18	4	9	2
Bagamoyo	5	...	2	1	...	...	...	...	...	...
Bukoba	5	...	6	2	...	...	26	...	...	...
Dar es Salaam										
European Hospital	1	...	...	...	3	...	1	1	...	...
Sewa Hadji Hospital	29	...	22	3	...	...	50	3	...	...
*Medical Officer of Health ... ..	...	...	2	...	...	...	...	...	...	...
*Private Practitioners ... ..	...	...	3	...	...	...	1	...	...	...
Dodoma	8	...	6	1	...	...	2	...	...	...
Handeni ... ..	...	...	...	...	...	...	...	...	...	...
Iringa	2	...	1	...	...	...	...	...	...	...
Kahama ... ..	...	...	1	...	...	...	...	...	...	...
Kasanga ... ..	...	...	...	...	...	...	...	...	...	...
Kasulo ... ..	...	...	...	...	...	...	...	...	...	...
Kibata ... ..	...	...	...	...	...	...	...	...	...	...
Kibaya ... ..	...	...	...	...	...	...	1	...	...	...
Kigoma	7	...	8	4	...	...	10	2	1	1
Kilosa ... ..	...	...	2	2	...	...	7	4	...	...
Kilwa	3	...	1	1	...	...	...	...	3	...
Kisaki ... ..	...	...	...	...	...	...	...	...	...	...
Kondoa-Irangi	3	...	10	...	3	...	4	1	9	...
Lindi	5	...	...	...	...	...	...	...	...	...
Lushoto	3	...	12	...	...	...	10	2	...	...
Mafia ... ..	...	...	1	1	1	...	...	...	...	...
Mahenge ... ..	...	...	5	2	...	...	3	1	...	...
Malangali ... ..	...	...	...	...	...	...	...	...	...	...
Manyoni ... ..	...	...	...	...	...	...	...	...	...	...
Mbulu ... ..	...	...	4	...	...	...	2	2	...	...
Mikindani	3	...	3	...	...	...	1	...	...	...
Mkalama ... ..	...	...	...	...	...	...	...	...	3	...
Morogoro ... ..	...	...	18	10	1	...	21	7	...	...
Moshi	32	...	69	2	...	...	73	5	...	...
Musoma ... ..	...	...	...	...	...	...	1	...	...	...
Mwanza	5	...	16	7	...	...	7	4	...	...
Namanyere ... ..	...	...	...	...	...	...	...	...	...	...
Pangani	12	...	41	8	...	...	32	3	...	...
Shinyanga ... ..	...	...	3	...	...	...	2	1	4	...
Singida ... ..	...	...	...	...	...	...	...	...	1	...
Songea	8	...	6	4	...	...	9	1	...	...
Tabora	6	...	18	6	6	3	10	1	...	...
Tanga	9	...	38	8	...	...	57	20	...	...
Tukuyu	9	...	8	...	...	...	2	...	2	...
Tunduru ... ..	...	...	...	...	...	...	...	...	...	...
Ujiji ... ..	...	...	6	...	...	...	...	...	...	...
Utete	2	...	...	...	...	...	...	...	...	...
TOTAL	162	...	316	65	17	5	350	62	32	3

*Not included in Tables V and VI.

INCIDENCE OF PRINCIPAL INFECTIOUS DISEASES DURING 1923, 1924 AND 1925.

Compiled from telegraphic returns received weekly from Medical Stations. The figures are frequently obtained from Native information and are not always reliable.

DISTRICTS.	SMALL-POX.						C.S.M.						POPULATION.
	1923		1924		1925		1923		1924		1925		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	
NORTHERN AREA.													
Bukoba	11	9	25	12	...	...	9	6	...	1	...	...	320,100
Mwanza	...	...	...	...	...	...	90	82	...	1	...	...	702,300
Arusha	2	...	...	...	3	3	1	1	...	...	...	...	97,700
Usambara	3	...	...	...	1	...	...	...	...	...	1	...	107,400
Moshi ...	...	...	...	...	1,362	461	1	...	...	...	...	...	158,200
CENTRAL AREA.													
Tabora	63	12	3	...	10	2	...	...	...	...	...	...	502,100
Dodoma	1	...	...	...	2	...	...	...	...	...	...	...	270,900
Kondoa-Irangi	1	...	...	...	...	...	...	...	...	...	2	...	196,700
Morogoro	1	...	...	...	...	...	...	...	...	...	...	...	174,300
SOUTHERN AREA.													
Iringa ...	...	...	...	...	...	...	...	...	...	...	...	...	104,800
Mahenge	...	...	...	...	1	...	...	...	...	...	...	...	74,600
Songea	10	...	...	...	...	...	...	...	...	...	...	...	148,200
WESTERN AREA.													
Kigoma	...	...	...	...	8	...	...	...	...	...	...	...	139,500
Ufipa ...	...	...	...	...	...	...	...	...	...	...	...	...	93,600
Rungwe	...	...	...	...	...	...	...	...	...	...	...	...	237,200
COASTAL AREA.													
Tanga...	98	10	...	...	1	...	...	...	...	...	...	...	86,700
Pangani	2	...	...	...	...	...	...	...	...	...	...	...	74,900
Bagamoyo	1	...	...	...	...	...	...	...	...	...	...	...	57,100
Dar es Salaam	...	...	...	...	...	...	...	...	...	...	...	...	149,100
Rufiji ...	8	...	...	...	...	...	...	...	...	...	...	...	83,200
Kilwa ...	13	2	2	...	...	...	...	...	...	...	...	...	84,000
Lindi ...	3	...	...	...	...	...	...	...	...	...	...	...	243,400
Mafia Island ...	...	...	...	...	...	...	...	...	...	...	...	...	10,000
TOTALS	217	33	30	12	1,388	466	101	89	2	1	6	3	4,116,000

INCIDENCE OF PRINCIPAL INFECTIOUS DISEASES DURING 1923, 1924 AND 1925—Contd.

DISTRICTS.	PLAGUE.						INFLUENZA.						POPULATION.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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NORTHERN AREA.

HELMINTHIC DISEASES.

Ankylostomiasis.—3,963 cases were treated in Government Hospitals during 1925, an increase of 989. The coastal towns again show the heaviest infection, 1,493 cases being treated at the hospitals along the coast; Tanga heads the list with a total of 1,383, as compared with 1,370 during 1924. The Sanitation Officer, Tanga, in his Annual Report states that the incidence of hookworm appears to be diminishing. Amongst 350 pupils in the Government School only 26 cases were detected and none of these were very heavily infected.

The native death reports from the out-districts, admittedly unreliable yet in which the standard of error is probably fairly constant, give the following figures for deaths from *Ankylostomiasis* from 1921 to 1925:—

1921	1922	1923	1924	1925
444	284	189	241	149

The experiment mentioned on page 193 of the Annual Report for 1924 has been commenced. After considerable discussion it has been decided that Muheza, a small township situated on the Tanga Railway, should be the selected site. Latrines have been built under the supervision of a European Sanitary Superintendent and during 1926 the Sanitation Officer, Tanga, will visit Muheza and supervise mass treatment with Carbon Tetrachloride.

The commoner forms of other Helminthic infections are widespread throughout the Territory, the most heavily infected district being Moshi on the slopes of Kili-manjaro, where 1,983 cases of *T. Saginata* and 1,994 cases of *Ascaris* infection were treated during 1925.

Schistosomiasis.—This disease appears to be spreading in the Territory; 589 cases of *S. haematobium*, 25 of *S. mansoni* and 111 of Bilharziasis are recorded in the reports received from the different hospitals. The Sanitation Officer, Tanga, reports that 49 cases occurred at the Government School as compared with 27 in 1924. July and August, dry months, were the months of highest incidence. Search has failed to reveal *Bullinus* in the district or any suspicious water condition common to any large group of cases. The commonly accepted aetiology of this disease does not appear to cover the Tanga cases. Similar reports have been received from the Medical Officer at Pangani, a coastal town about 30 miles south of Tanga.

The Sanitation Officer at Tabora reports as follows:—

“An attempt was made to ascertain the incidence of Urinary Bilharzia among natives. The urines of young school children at Tabora and Ussoke and adult prisoners at Tabora Gaol, were examined. 35% of children and 15% of adults were found to be infected with *Schistosoma haematobium*. 77 cases in all were noted as follows:—

A. Young School Children.

	Number Examined	Number Infected
Tabora Government School	88	37
Ussoke Government School	61	19
Native School, Rufita, Tabora	15	2
Native School, Main Street, Tabora	11	4
	<hr/> 175 <hr/>	<hr/> 62 <hr/>

B. Adults.

Tabora Prison	100	15
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The infected school children seen at Tabora included cases having their origin in Tabora, Shinyanga, Kahama and Nzega. About half the number of these cases appeared to have been infected at Shinyanga.

At Tabora collections of fresh water molluscs were found in pools at Rufita, Mwanza Road, Main Street, and Chem Chem. These were forwarded for identification to Dr. Corson, Acting Director of Laboratory, Dar es Salaam. Two species were identified as *Isidora nasuta* (found in the four above districts) and *Lanistes ovum*—[Peters].

Of the snails dissected at Tabora, forked-tailed cercariae without eye spots were noted in *Isidora nasuta* from the Rufita pool. The majority of cases having their origin at Tabora appeared to have been infected at this pool."

The work of the African District Sanitary Inspectors who are being stationed in the rural districts should result in the improvement of the standard of village sanitation with a consequent diminution in the incidence of helminthic infections generally.

(II) *General Measures of Sanitation*.—In certain of the coastal towns sewers constructed during the German occupation exist, these discharge into the sea and in some cases are in poor condition. At Dar es Salaam the outfalls have been repaired and function satisfactorily; it is however only a small section of the town, mainly along the water front, which is served by these sewers. In the remainder of the residential area the house drains discharge into porous cesspools and this method of disposal is used in the other townships where a water-carriage system is in existence. The cesspools work in a satisfactory manner when the soil is absorbent and where the water table is not too near the surface; when the rainfall is heavy they are liable to overflow and become offensive. There is also considerable danger of the covers, particularly if constructed of concrete, becoming damaged, thus affording ingress and egress for mosquitoes. The construction of cesspools cannot however be continued indefinitely in Dar es Salaam; building activities are increasing and the provision of a proper sewerage system for the Residential and Commercial Areas cannot long be delayed.

In the majority of up-country townships the bucket and incinerator form of conservancy is used; constant supervision is necessary to see that the work is properly carried out; the greatest drawback is the fact that the natives of certain districts will not do this work, however high the wages offered may be. Labour has to be imported from other districts and the comfort and health of the whole community is at the mercy of the conservancy gang; should they strike, their demands must be granted otherwise the sanitary condition of the township will become appalling in a few days.

In the native quarters the deep pit privy is almost universally used. When properly constructed and maintained these give rise to no nuisance but frequent inspections are necessary to ensure that they do not become breeding places for flies and mosquitoes.

Scavenging and refuse disposal in all but the smallest townships is carried out by labourers paid and supervised by the sanitation department. Covered dustbins for streets, markets, and other public places are supplied out of the vote for sanitary equipment; the Public Works Department provides dustbins for government quarters and offices, while private individuals are required to maintain suitable receptacles for their own use. In the majority of the townships the refuse is removed to incinerators in ox or hand carts. For Dar es Salaam one large motor refuse lorry similar to the type in use at Hong-Kong has been obtained and is used in the residential area. Household refuse is dealt with much more expeditiously by this method and another motor lorry will be brought into use during 1926.

At Dar es Salaam incineration is still carried out at batteries of movable incinerators made of iron railway sleepers. These are erected in low-lying situations which require filling and moved as the work is completed. These incinerators cause a certain amount of nuisance and the erection of a proper destructor will have to be considered in the near future. In the smaller townships the type of incinerator in use is the Khartoum pattern.

Drainage.—The surface drainage of the towns is unsatisfactory, far too many open earth drains exist which are a constant source of worry and expense. This question was discussed on page 192 of the Annual Report for 1924. The Sanitary Engineer has arrived and it is hoped that definite drainage schemes will be provided for the larger townships which can be proceeded with as funds allow. The capital expenditure would be considerable but the annual cost of maintenance and repair would be greatly diminished, while the provision of masonry drains would remove numerous breeding places for mosquitoes.

Water Supplies.—Some improvements have been made during 1925 in the water supplies of certain townships but very much remains to be done. The position at Dar es Salaam is discussed on page 51. The provision of a satisfactory water supply is the most important factor in the Public Health of the community. The presence of numerous wells mostly grossly contaminated, within the boundaries of a township, not only increases the danger of an outbreak of water-borne disease but also provides numerous breeding places for mosquitoes. The absence of a pipe-borne supply necessitates the use of many small receptacles for the storage of water in the native quarter which provide the main breeding places for *aedes aegypti*.

Offensive Trades.—Adequate powers to control Offensive Trades exist under the Township Rules. Rules 45 and 46 are as follows:—

“45. No person shall place, store or keep or permit the storage or keeping of any sisal, hides, skins, raw cotton whether ginned or unginned or cotton seed or any seeds, grain, or other parts of plants intended for consumption as food or fodder or for sale or export, except in such premises or locality and in such manner as may be approved by the Authority.

The Authority may by order in writing direct the removal of anything stored or kept in contravention of this rule to any premises or locality within the limits of the Township or may direct removal from the Township, and the owner or person in charge of the goods so ordered to be removed shall remove them accordingly.”

“46. No person shall establish or carry on any dangerous or offensive trade or any noxious or offensive business or manufacture or any camel oil-mill without the written permit of the Authority. Such permit may be suspended if at any time the Authority considers the conditions unsatisfactory.”

Whenever occasion arises sites suitable for offensive trades are selected in the different Townships by the District Town Planning and Building Committees and submitted for approval to the Central Town Planning and Building Committee. Difficulties do arise with reference to the storage of grain, hides and other rat-attracting produce by the small trader who buys from the local natives in small quantities and in turn sells to the exporter. This type of middleman cannot afford to erect rat-proof godowns and yet has to hold his stocks until he accumulates sufficient to attract the purchaser for export. The present conditions under which rat-attracting produce is stored cannot be allowed to continue and the question is again under consideration at the present time.

Clearance of bush and undergrowth.—This work is carried out as part of the general duties of the sanitary labourers with the assistance of station hands and prison labour.

Sanitary Inspections.—The following stations were inspected by the Director of Medical and Sanitary Services, Deputy Director of Medical Services or Deputy Director of Sanitary Services during the year:—

Arusha twice, Dodoma four times, Igali once, Iringa once, Kigoma twice, Kilosa once, Kilwa once, Kondoa-Irangi twice, Korogwe once, Lupa once, Malangali once, Mombo once, Morogoro twice, Moshi twice, Pangani once, Songea once, Tabora twice, Tanga twice, Tukuyu once, Ujiji once, Utete once.

III. *School Hygiene*.—Progress in the Medical inspection of school children is being made at Dar es Salaam, Tanga and Tabora, and detailed reports are given by the Medical Officers of Health of those stations at pages 52, 59, and 66 which show that excellent work is being done, both in the treatment of disease and in the inculcation of the hygienic sense.

The need for an officer to co-ordinate this work throughout the Territory is referred to by the Director of Medical and Sanitary Services on page 21.

IV. *Labour Conditions*.—Labourers, even when perfectly healthy, at present frequently suffer considerable hardships on the journey from their homes to the plantations; the trip may take weeks and the native whose home is in a non-malarial, tick-free district is practically certain to become infected with Malaria and relapsing fever. Camps are poor or non-existent and the food obtainable will probably differ from that which he eats in his own village with the result that digestive troubles occur and the labourer arrives at his destination in poor condition, unfit to perform hard work, and with his resistance so lowered that he falls an easy victim to any disease which may be prevalent amongst the natives on the plantation. The provision of Government controlled rest camps on the main labour routes where the labourer could obtain lodging and food and where adequate medical supervision would be available would do much to improve the present state of affairs.

The Labour Commissioner states that the large employers of labour are showing an increased appreciation of the necessity for providing good housing for their employees but that a great advance is required before the position can be regarded as at all satisfactory.

During the last quarter of 1924 a memorandum, dealing with the general and special aspects of the employment of labour, was drawn up by the Director of Medical and Sanitary Services and widely circulated to Administrative Officers, Medical Officers and all employers of labour, for their guidance.

The Memorandum included the procedure that should be adopted prior to and during recruiting, and provided detailed notes under the following heads:—

Diet and Feeding, Housing, Water Supplies, Bath and Laundry Accommodation, Latrines, Sanitation and Medical Organisation and Hospitals. It is hoped that the information contained in this circular will minimise materially the incidence of disease and promote the health of the labourers.

The following is a quotation from the Labour Commissioner's Report, 1925, section 129:—"The most serious defect on almost all plantations is undoubtedly the sanitary accommodation; proper facilities for ablutions and washing of clothes seldom exist, while the latrines are usually of a most primitive type and badly kept; flies and mosquitoes abound, and the whole camp is in an objectionable condition. The main cause of such a state of affairs is the difficulty in enforcing any camp discipline, which at present renders it almost impossible for a manager to ensure the observation of sanitary rules. Much might be done by the introduction of a better type of accommodation, while the use of fencing should be general, since this in itself is a valuable aid to cleanliness. Without some means of compelling the observance of rules of hygiene, however, we can expect little improvement; I deal further with this question in the section "Estate Discipline."

In the section on "Estate Discipline" the Labour Commissioner points out the impossibility of maintaining compounds in a sanitary condition until Estate Managers are given powers to punish habitual offenders against the most elementary sanitary regulations. However well arranged the camp and latrines may be, difficulties are certain to arise before raw natives can be induced to make proper use of the sanitary conveniences provided; something more than persuasion is required; it is possible that much could be done by dividing compounds into sections each with its own latrine and incinerator and placing in charge of each section an elected headman who would be responsible, in addition to his other duties, for the cleanliness of that area of the compound. Regular daily inspections by a European should be made, marks allotted each day for the cleanliness of the huts, latrines and general surroundings of each section, and a prize of extra rations or free issue of meat made on pay day to

the section which had been maintained in the most cleanly manner during the period. It is possible that in this way a spirit of rivalry might be created while the weekly or monthly prize would give each labourer a personal interest in the condition of the section of the compound in which he lives. The writer has been informed that an experiment of this nature was most successful when tried in the Tanga district.

The provision of medical attention and hospital accommodation for plantation labourers presents many difficulties. Only the largest estates could afford the expense of engaging a fully qualified Medical Officer and it would not be easy to obtain suitable candidates for these posts.

Adequate medical attention could be provided on the great majority of plantations by the employment of Indian Sub-Assistant Surgeons or on the smaller estates by Indian or Native Compounders. A commencement has been made in training native dispensers but it will be a considerable time before sufficient numbers are trained to supply employers of labour in addition to the needs of the Medical Department.

V. *Housing and Town Planning*.—Fourteen meetings of the Central Town Planning and Building Committee were held during the year. In addition to the consideration of the plans of minor townships and the siting of Government and other buildings the planning of Kigoma, Bukoba and Kilosa townships has been completed. A considerable part of the Committee's time has been expended in the consideration of the provision of additional sites for Government buildings at Dar es Salaam. There is a serious shortage of Government-owned quarters at Dar es Salaam which necessitates the renting of privately owned houses to provide accommodation for officials. This causes great hardships to the non-official community who have often to occupy unsuitable dwellings or to enter into competition with the Government to obtain proper accommodation. The Central Town Planning and Building Committee's suggestions were embodied in a memorandum and submitted to the Government.

A building programme for a number of smaller bungalows which will provide quarters for the less senior officials has been included in the draft estimates and type plans of these buildings have been prepared and approved.

The housing question is equally acute in many of the stations outside Dar es Salaam and the distribution of the European staff of the Medical and Sanitation Department has too often had to be governed by the fact that quarters are not available in any particular township.

VI. *Food in relation to Health and Disease*.—The Townships Rules provide for the inspection and control of premises used in the preparation and sale of food and drink. The following trades and premises require Licences and are inspected annually before the licence is renewed.

Eating houses	
Aerated Water	} Manufactories.
Ice-cream	
Sherbet	
Cooling drink	
Milk shops	
Cowsheds used for milch cattle	
Bakeries	
Laundries.	

Owners of businesses of the above description are informed that their premises will be required to reach a satisfactory sanitary standard before they can be recommended for renewal of licence.

The following points in connection with licensed premises receive special attention but each individual case is considered on its merits:—

“Every room must be provided with adequate ventilation and light.

“Floors must be levelled and repaired, rat-holes filled up, walls plastered and whitewashed. Paintwork must be cleaned or renewed.

“Latrines, drains and wash-places must be adequate and in a satisfactory and sanitary state.

“Water containers must all be provided with mosquito proof covers.

“Utensils and furniture used for the business, if connected with the preparation of food or drink, must be clean and in good order.

“A sanitary dust-bin must be provided.”

In addition the following rules are enforced:—

“No premises used as a bakery or dairy or for the manufacture of aerated waters, ice-cream, or for the preparation of cooked food shall be used as a sleeping apartment.

“No premises will be licensed as a bakery unless adequate provision is made for protecting the bread and other foodstuffs manufactured thereat from flies and dust.” A suitable receptacle is usually provided for the storage of these articles and often fitted with a glass front.

“No sheep, goats or cattle shall be allowed to be upon any premises licensed for the sale of foodstuffs.

“Rooms used for the storage of foodstuffs or material which may be attractive to rats must be made proof against these animals as far as possible.”

It is not possible to attain to the same sanitary standard in all the townships in the Territory. Regulations which may fairly be employed in Dar es Salaam, Tanga or Tabora could not be rigidly enforced in the case of a small trader in an up-country station, but as a general rule the conditions under which foodstuffs are distributed in Tanganyika Territory compare favourably with those in existence in other parts of Eastern Africa.

Markets.—The markets are controlled by the Administrative Officers, and Market Masters are appointed who are responsible for the general supervision of the markets. Inspections of the general conditions and of the food exposed for sale are carried out by representatives of the Medical Department.

Slaughter-houses.—In those townships where an officer of the Veterinary Department is stationed the supervision of the slaughter house and the inspection of carcasses is carried out by that Department. In other stations these duties are performed by the Medical Department.

Imported food supplies.—These are of minor importance in the dietary of the native population. Salt and sugar, approximately 1,500 tons of each, were imported during 1925. About 600 tons of dried fish, mainly shark and barracouta, are imported yearly into Dar es Salaam, a special market being provided where this food is sold. Although the fish is offensive to the senses of a European there is no evidence that it has any harmful effect on the consumer.

Indigenous food supplies.—During any year when average climatic conditions obtain, each district of the Territory produces ample food supplies for the local inhabitants. Tanganyika, however, has a low rainfall for a tropical country, and droughts are not infrequent. A shortage of rainfall in one area is generally compensated for by abnormally good conditions in others, and, taking the Territory as a whole, sufficient indigenous food supplies are grown. The inhabitants, like most other African natives, are somewhat improvident, and not uncommonly a distinct shortage of food exists immediately before harvest time. The foodstuffs grown by the local native do not provide for a varied dietary. In their own villages wild fruits and herbs gathered by the women supplement the normal diet, but when adverse conditions arise or when the native leaves his home he is liable to suffer from symptoms of deficiency disease.

(B) Measures taken to spread the knowledge of Hygiene and Sanitation.

The Education Department of the Territory do everything they can to teach Hygiene and Sanitation to the pupils at the Government Schools. An excellent elementary text book “Afya” written in Kiswahili by the Director of Education is in use in all Government Schools, while during 1926 all Government Central Schools where English is taught will be supplied with copies of Dr. Blacklock’s books. At the larger stations the Sanitation Officers and European Sanitary Superintendents lecture to the pupils;

at Tanga the Sanitation Officer has established a Dispensary which is staffed by pupils of the school who have been taught by him and it is hoped that these boys will eventually enter the Government Medical Service.

At the latter end of 1925 the Zanzibar Government kindly lent the two cinematograph films "Malaria" and "Unhooking the Hookworm," these were shown at the Cinema at Dar es Salaam. The school children, the Health Office employees, the Native staffs of the Hospitals all attended, as also did the Askari of the K.A.R. and Police. Explanations of the films were given in Kiswahili and the Natives appeared to take an intelligent interest. It is probable that better results would be obtained if films depicting African life could be shown.

The posting of African District Sanitary Inspectors amongst the village communities must also result in the spread of the knowledge of Hygiene and Sanitation amongst the peasant class. Progress will necessarily be slow but the teaching of the Inspectors coupled with the return of schoolboys to their homes will ensure that the elementary principles of sanitation will become known to an ever increasing number of natives; whether the peasant class will put this knowledge to practical use is a different question but it is at least probable that the more intelligent and progressive tribes will do so.

(C) Training of Sanitary Personnel.

In previous Annual Reports it has been emphasised that, if improvements are to be made in village sanitation, trained Native Sanitary Inspectors must be provided. During 1925 a commencement has been made at the Health Offices at Dar es Salaam, Tanga and Tabora in training candidates for these posts. The basic principle of the scheme is to obtain candidates of some social standing from the districts concerned who, when they have undergone a course of training at a Health Office, are returned to work in their own districts. It is essential that the African District Sanitary Inspectors shall be fully acquainted with the customs and prejudices of the people amongst whom they have to work. The African villager is one of the most conservative persons in the world and little or nothing will be accomplished by sending an alien inspector, however well trained, to alter the habits of centuries. Candidates are required to have sufficient general education to profit by the instruction given and must read and write Kiswahili sufficiently well to be able to send intelligent reports to the Sanitation Officers under whom they work.

The training given has not been elaborate and extends over a period of about three months. The pupils are given practical instruction in the construction of native houses of good type, the necessity for ventilation and light being emphasised, in the construction of deep pit latrines, the construction and use of incinerators, and in simple methods of improving and protecting native water supplies. Elementary lectures are given on infectious diseases, insect, food and water-borne diseases and in native diets, particular attention being given to the dietary of infants; all candidates are trained as vaccinators. In the great majority of cases the progress made by the pupils has been much greater than was anticipated and the reports sent in by those African District Sanitary Inspectors who have been posted to their districts are, in the main, very satisfactory.

In the opinion of the writer the whole success of the scheme depends on adequate supervision and support of these natives by trained European personnel. An African Sanitary Inspector, however enthusiastic he may be, is certain to become apathetic when he finds that his efforts to improve village sanitation receive little or no assistance from the local inhabitants and that he receives no evident support from European Authority; a monthly visit and an inspection of the villages by a European in company with the African District Inspector would keep the African Inspector up to his work and would also convince the local natives that his efforts were backed by European Authority.

In the absence of some form of Medical Training School it has not been possible to do much to provide more highly trained natives to undertake the duties of African

Urban Sanitary Inspectors. English speaking candidates of the right type are not easy to obtain. The time of the Sanitation Officers is very fully employed in carrying out their ordinary duties together with the training of the African District Inspectors. It is not at present considered feasible to institute regular courses of a more advanced nature. Sanitation Officers and Medical Officers are encouraged to engage any suitable candidate who presents himself and to train him for work in their own stations but no central school of instruction for Sanitary Inspectors can be appointed to carry out the work.

NOTE:—Although the following extract from a report by the Sanitation Officer, Tabora, refers to early 1926, and not to the year under review it is included as it may be of interest as showing how the work of the African District Sanitary Inspectors is progressing.

“The Sanitation Officer inspected the out-districts of Igalulu, Mabama, Ussoke and Ussinge during the month. It is gratifying to note that much good work is being done by the District Native Sanitary Inspectors, and if the conditions existing at the above stations can be taken as an index of how the work is being carried on throughout the district, it may be concluded that the statistics rendered in their monthly reports can be accepted with confidence.

The Inspectors appear to enjoy the co-operation of the native chiefs; and the general native population, on the whole, seem willing to comply with instructions given by the inspectors, in spite of the element of force being absent.

The general cleanliness of houses, compounds and surroundings at the villages inspected was found to be satisfactory.

An attempt has been made in most cases to provide increased ventilation for huts, and although in many instances the inlets can hardly be called windows, it nevertheless appears to be a step in that direction.

Latrine accommodation has been provided for practically all houses and moreover the natives make use of these conveniences. Unfortunately the exceptional rainfall of this season has raised the ground water to such a level as to prevent pit privies of adequate depth being dug, with resultant extensive breeding of flies.

Mosquitoes are very prevalent in these villages at present on account of the large number of pools and swamps in the vicinity. A large number of collections are still found in premises, although in many cases it was noted that householders were making an attempt to prevent mosquito breeding. Many pools have been filled in or drained. In some instances this has not been found possible and in other cases the natives have refused to do the work even after instructions from the District Officer. It is difficult to see how such measures can be enforced at villages where Township Rules are not in operation.

At each village a plot of ground has been laid out for use as a cemetery. The general population seem to have no objection to using these burial grounds; the Sultans however consider it beneath their dignity to bury any member of their families in the general native cemetery and maintain that this must be done at their residences. Further there is a belief in some districts that should a child die under the age of six days, it must be buried under the house, otherwise the mother will be unable again to bear children. While considering it unwise to attempt to discontinue these practices straight away, the inspectors have been instructed to see that these burials are carried out in as sanitary a manner as possible and at the same time point out the hygienic disadvantages of such customs.

With regard to child welfare work, the inspectors during their rounds appear to be doing their best to instruct the natives in this connection, no doubt with a certain amount of success.

An effort has been made to collect births and deaths statistics. I think it might be considered that the number of deaths reported is fairly correct but difficulty appears to be experienced in obtaining birth statistics. This would

seem to apply to Tabora Township also where it is customary for mothers to go out to the shambas to bear their children, this being thought to have a beneficial effect on the crops.

The following is a comparison of Native Infantile Mortality Figures in the Township and Out-districts for the months of January to April:—

	January	February	March	April	Average, January to April
Tabora Township ...	266	400	285	266	304
Out-districts of Tabora Sub-district ...	76	113	301	148	162

The chief causes of death among infants during these months appear to have been Malaria and Respiratory conditions.

With reference to water supply at these out-district villages, in some cases, *e.g.*, Itetemia, an effort is being made to have properly built wells instituted; in other cases where this is not possible at present the water holes have been fenced round or covered over with a grass banda roof.

Where houses are dilapidated and uninhabitable, the inspectors have been instructed not to order the work of demolition but to refer the matter to the District Officer when on tour in the district, in order to avoid giving cause for trouble.

At villages where cattle are slaughtered a site has been demarcated for this purpose and the slaughtering is carried out under the supervision of the African District Sanitary Inspector. In several districts unfortunately it is customary to keep the meat for four or five days until infested with fly maggots and in this "high" condition it is apparently eaten with relish by the natives.

In several out-districts difficulty is also being experienced in convincing the natives that providing separate accommodation for cattle, etc., and human beings, is a desirable measure for them to adopt."

Early in 1925 instructions were received that information on the subject of the Mosquito-proofing of Govt. Quarters should be included in the Annual Medical Report.

The following particulars have been supplied by the Director of Public Works:—

MOSQUITO-PROOFED GOVERNMENT QUARTERS, TANGANYIKA TERRITORY.

STATION.					Mosquito proofed Houses.	Non-Mosquito proofed Houses.	Remarks.
Dar es Salaam	107	36	No houses are protected by mosquito proofing.
Tanga	...	...	...	...	27	3
Pangani	...	...	...	...	2	4
Kibata	...	...	...	...	...	1
Tunduru	...	...	...	...	...	1
Mkalama	...	...	...	...	1	...
Maswa	...	...	...	...	...	3
Musoma	...	...	...	...	4	...
Kasulu	...	...	...	...	1	1
Kibondo	...	...	...	...	...	1
Kigoma	...	...	...	...	4	4
Ujiji	...	...	...	...	4	...
Kahama	...	...	...	...	2	...
Shinyanga	...	...	...	...	2	3
Nzega	...	...	...	...	...	2
Tabora	...	...	...	...	30	...
Lindi	...	...	...	...	5	8
Biharamulo	...	...	...	...	...	4
Iringa	...	...	...	...	...	7
Songea	...	...	...	...	...	6
Lipumba	...	...	...	...	...	1
Bukoba	...	...	...	...	10	3
Mwanza	...	...	...	...	14	3
Liwale	...	...	...	...	3	...
Malangali	...	...	...	...	...	1
Newala	...	...	...	...	...	1
Masasi	...	...	...	...	...	1
Tukuyu	...	...	...	...	...	7
Moshi	}	...	...	...	...	...
Arusha		...	...	...	...	...
Igali	...	...	...	...	...	7
Mikindani	...	...	...	...	1	6
Morogoro	...	...	...	...	15	1
Namanyere	...	...	...	...	...	3
Kasanga	...	...	...	...	...	3
Mahenge	...	...	...	...	1	8
Utete	...	...	...	...	6	1
Bagamoyo	...	...	...	...	1	4
Mafia	...	...	...	...	...	1
Dodoma	...	...	...	...	7	3
Manyoni	...	...	...	...	...	1
Mpwapwa	...	...	...	...	...	6
Singida	...	...	...	...	...	2
Kondoa-Irangi	...	...	...	...	5	...
Lushoto	...	...	...	...	...	8
Kilwa	...	...	...	...	3	4
Kilosa	...	...	...	...	6	...
TOTAL					261	159	

In the same despatch particulars were asked for as to the relative incidence of malaria on persons living in protected and unprotected quarters.

It appears to be impossible to obtain any reliable statistics as to the relative incidence of malaria amongst the inhabitants of protected and unprotected quarters.

In out-stations officers spend a considerable portion of their time on safari and it will always be difficult and sometimes impossible to decide whether infection was acquired in the station or on tour. In the larger towns the personal factor enters into the question so largely that no statistics can be reliable. It is obvious that a family who spend their evenings quietly at home, even when the quarters are not mosquito-proof, but who wear mosquito boots and take other precautions to avoid infection are less liable to get malaria than the tenants of a properly mosquito-proofed dwelling who spend the majority of their evenings attending social functions at a club or other building which is not mosquito-proofed.

(D) Recommendations for future work.

Major anti-malarial work.—The more important townships should be provided with plans showing the engineering works necessary to eliminate permanent mosquito breeding places. Detailed estimates should be prepared and the work proceeded with from year to year as funds permit.

Water supplies.—Definite schemes for a pipe-borne water supply for each of the more important towns should be drawn up and provision included in the estimates for the work to be carried out at an early date. In the smaller townships which depend on supplies from wells, these should be put in order and pumps provided instead of the usual insanitary rope and tin.

Roads and drains.—The extension of metalled roads in the native quarters would do much to improve the sanitary condition of these areas. The substitution of permanent surface water drains for the present earth channels would result in a very considerable reduction in the quantity of labourers required for maintenance purposes alone.

Maternity and Child Welfare work.—Every effort should be made to extend this work and to train native midwives for work in the villages. It is most important that Nursing Sisters employed in this work should have a good knowledge of native languages and understand native habits and prejudices. Nursing Sisters engaged in welfare work in townships can also assist in the inspection of school children. In order that this work may be carried on efficiently it is necessary that the notification of births and deaths should be made compulsory for all races.

Native Sanitary Personnel.—Should a Medical School be started in the Territory a branch for the training of Native Sanitary Inspectors should be included, as has been stated in section C of this report. The work of training native sanitary personnel up to the standard requisite for an urban inspector cannot be carried on in a satisfactory manner by the Sanitation Officers.

Lymph Manufacture.—The conditions under which vaccine lymph is produced at Dar es Salaam are not satisfactory and it is difficult to ensure that adequate reserves are always available. The question of the removal of the Vaccine Lymph institute to Mpwapwa where the conditions would be much more satisfactory is under consideration at the present time.

A. H. OWEN,

Deputy Director of Sanitary Services.

REPORT OF THE MEDICAL OFFICER OF HEALTH FOR DAR ES SALAAM.

By

DR. R. R. SCOTT, M.C., M.B., B.S., M.R.C.S., L.R.C.P., D.P.H.,

Senior Sanitation Officer.

The year 1925 shows no outstanding features of importance. Consolidation of the work inaugurated has proceeded on the usual lines, and the staff required for the administration of the Public Health of the town is now available.

The appointment of additional separate European staff for the Township Authority is very satisfactory, and the approval of the appointments of a Sanitary Engineer in the Public Works Department, and a Medical Entomologist should prove of the utmost value.

Maternity and Child Welfare work has made some progress under Miss Allardes, whose energies are, however, directed more towards the child welfare than the maternity, owing to the lack of satisfactory notification of births. Authority to compel the notification of African births under the Native Authority Ordinance, 1923, was given by Government Notice in July, but these powers are not yet being satisfactorily exercised in this town.

No epidemic occurred during the year, but malaria is still reducing the efficiency of the population and the cost of this disease to the community in work lost must be enormous; anti-mosquito measures absorbed £1,927 in maintenance and £44 in capital expenditure from the funds of this Department: these figures ought to be reversed if we were tackling the problem in a proper manner.

The training of African District Sanitary Inspectors was commenced during the year, and a number of men were trained and distributed to the villages, where they are endeavouring to instil elementary ideas of sanitation into the rural population.

Tuberculosis is still a source of worry, and the lack of suitable accommodation for cases of the disease, whether early or late, is most unfortunate. The continued escapes of patients from the Infectious Diseases Hospital, owing to the lack of adequate fencing, is to be deplored.

Little has been done in the way of direct Public Health propaganda, but constant education of the public of all communities by the frequent house to house visits of the Inspecting Staff is taking place.

Additional models of insects and some new lantern slides have been added to the Museum, and a large size model flea, measuring about fifteen inches in length, was presented by Cecil Cochrane, Esq., of Newcastle-on-Tyne, and is gratefully acknowledged.

STATISTICS FOR THE YEAR 1925.

	Europeans	Africans	Asiatics (including Syrians)	Total
1921 Census :—				
Civilian population	555	10,901	4,008	15,464
K.A.R. and Police not included in above ...	...	1,422	...	1,422
TOTAL ...	555	12,323	4,008	16,886
1925 Population estimated by Senior Commissioner on 30th May, 1925, by calculation from inhabited houses and other figures.				
Civilian population	650	19,600	4,500	24,750
K.A.R. and Police not included in above ...	...	1,018	...	1,018
TOTAL ...	650	20,618	4,500	25,768
Increase of population during 41 months (December 1921 to May 1925)	95	8,295	492	8,882
Percentage increase over 1921 population ...	17.1%	67.3%	12.28%	52.59%
Monthly rate of increase for 41 months ...	0.41%	1.64%	0.30%	1.28%
Annual rate of increase for 41 months ...	4.92%	19.68%	3.59%	15.36%
Immigrants contributing to the town's population cannot be stated.				
Estimated population on 31st December 1925 (<i>i.e.</i> population on 30/5/25 + calculated increase for 7 months: total population by calculation, not by addition of the three estimated popu- lations, which gives 28,248.10 : error = .06%)	668.65	22,984.95	4,594.5	28,076.81
Births registered :— (Registration of African and Asiatic births is not compulsory under the Registration of Births and Deaths Ordinance)				
1923	12	...	8	20
1924	19	...	6	25
1925	20 = a rate of 29 per 1,000	...	8	28
Deaths registered at Health Office for which burial permits were issued.				
1923	8	238*	79	325
1924	8	259	79	346
1925	4	304	124	433
The figures given for registration of deaths by the District Registrar are as under.		(*corrected total)		
Europeans 5				
Africans 296				
Asiatics 97				
TOTAL 398				
Crude death rate per 1,000 based on estimated population at 31/12/25... ..	6.0	13.2	26.9	15.4
Infantile Mortality :— No rates can be given because there were no European infant deaths and African and Asiatic births are not yet notified.				

SUMMARY OF DEATHS.

Classified as CERTIFIED when seen by a medical practitioner before death or certified by Post-Mortem.

„ „ NOTIFIED when cause of death ascertained by inquiry after death.

					Certified	Notified	Total
Europeans	...	...	...	...	4	...	4
Asiatics	...	...	...	...	86	38	124
Africans	...	...	...	...	132	172	304
TOTAL					222	210	432

TABLE SHOWING INCIDENCE OF DEATHS OCCURRING IN DAR ES SALAAM TOWNSHIP DURING 1925.

Month							European	Asiatic	African	Total
January	...	...	...	...	...	...	...	9	20	29
February	...	...	...	...	...	...	...	6	18	24
March	...	...	...	...	...	...	...	14	26	40
April	...	...	...	...	...	...	...	13	21	34
May	...	...	...	...	...	...	...	9	19	28
June	...	...	...	...	...	...	...	6	19	25
July	...	...	...	...	...	...	1	16	32	49
August	...	...	...	...	...	...	...	13	23	36
September	...	...	...	...	...	...	...	13	21	34
October	...	...	...	...	...	...	3	5	36	44
November	...	...	...	...	...	...	...	7	31	38
December	...	...	...	...	...	...	...	13	38	51
TOTALS							4	124	304	432
Mean Monthly Rate							.33	10.33	25.33	36.00

COMPARATIVE TABLE OF DEATHS.

							European	Asiatic	African	Total
1921	...	...	...	...	...	...	7	52	170	229
1922	...	...	...	...	...	...	11	44	184	239
1923	...	...	...	...	...	...	8	79	237	325
1924	...	...	...	...	...	...	8	79	259	346
1925	...	...	...	...	...	...	4	124	304	432

SUMMARY OF MORE FREQUENT CAUSES OF DEATH.

				1924			1925		
				Certified	Notified	Total	Certified	Notified	Total
Pneumonia (all varieties)	...	...	...	31	31	62	45	38	83
Ankylostomiasis	...	...	...	19	36	55	40	34	74
Malaria, not including Blackwater Fever	...	...	...	9	1	10	9	4	13
Pyrexia of uncertain origin	...	...	...	3	32	35	7	31	38
Old age and natural causes	...	...	...	6	27	33	4	30	34
Tuberculosis of lungs	...	...	...	14	10	24	16	6	22
Bronchitis including undifferentiated chest complaints notified as "Kifua"	...	...	...	5	19	24	1	4	4

INFECTIVE DISEASES : PREVENTIVE MEASURES.

Mosquito-borne Disease.

Anti-mosquito measures were pursued on the lines of former years, the results being shown in the following tables.

The appointment of a Sanitary Engineer and Entomologist have now been approved, and there only remains to find the capital to put into a sanitary condition the permanent breeding places of mosquitoes by which the town is surrounded, by the provision of permanent drains and filling where necessary.

COMPARATIVE TABLE SHOWING COLLECTIONS OF MOSQUITO LARVÆ FOUND IN THE TOWNSHIP.

					1923	1924	1925
Anopheles	...	...	...	...	636	574	824
Culex	...	...	...	...	2,166	1,115	1,431
Stegomyia	...	...	...	...	1,457	630	1,674
TOTAL					4,259	2,319	3,929

ANALYSIS OF FINDINGS OF MOSQUITO LARVÆ—DAR ES SALAAM TOWNSHIP, 1925.
MONTHLY TOTALS.

					Rainfall* (in inches)	Anopheline	Culex	Stegomyia
January	...	...	...	...	8.150	88	148	117
February	...	...	...	...	4.086	46	95	126
March	...	...	...	...	2.143	104	127	185
April	...	...	...	...	5.340	84	123	161
May	...	...	...	...	1.170	102	176	143
June	...	...	...	...	1.206	87	152	159
July	...	...	...	...	1.350	74	126	135
August	...	...	...	...	0.040	48	72	93
September	...	...	...	...	1.976	34	58	74
October	...	...	...	...	2.592	34	88	92
November	...	...	...	...	4.361	52	145	203
December	...	...	...	...	9.622	71	121	186
TOTAL					42.036	824	1,431	1,674

*Recorded at the Heath Office.

CHIEF RECORDED BREEDING PLACES OF ANOPHELINES.

					1923	1924	1925
1. Dockyard and Kurasini and seven creeks containing fresh water springs	...	...	...	...	171	183	240
2. Gerezani Valley	...	...	...	...	153	126	192
3. Town (Swampy places, Road pools and Surface drains within the actual town regularly searched by a special man)	...	...	...	...	125	50	123
4. Msimbazi Valley	...	...	...	...	80	123	153
5. Town (Casual finds by the Sectional Inspectors)	...	...	...	...	68	92	114

COMPARATIVE TABLE OF 'ARTIFICIAL MOSQUITO BREEDING PLACES.

	Anopheles			Culex			Stegomyia		
	1923	1924	1925	1923	1924	1925	1923	1924	1925
Tins	13	34	...	52	245
Jars	14	14	...	60	244
Flower pots, etc.	7	...	...	8	4
Drums and Barrels	2	2	...	47	74	...	111	595
Rcof tanks and gutters	3	...	...	7	4
Unclassified iron containers	1	2	...	17	25	...	28	66
Defective structure	1	...	...	5	...	...	3	5
Excavations and Borrowpits	4	7	...	1	13	...	...	...
Dhows (water containers in)	2	11	37	85	23
Tanks	3	4	3	753	85	59	1,200	225	341
Drains	31	31	...	100	89	...	6	4
Pools	24	64	...	38	90	...	1	19
Soakage and Cess pits	103	187	...	1	12
Wells	13	8	2	75	29	22	1	5	6
Rubbish	101	2	7	136	4	66
Gully traps and Street drains	3	138	191	172	...	...	5
Flushing Cisterns	3	...	...	5

The largest number of larvæ, 421, was found in May: the smallest number, 166, in September.

The greatest number (595) of *Stegomyia* larvæ was found in DRUMS and BARRELS.

The greatest number (187) ,, *Culex* larvæ was found in SOAKAGE and CESS PITS.

The greatest number (64) ,, *Anopheline* larvæ was found in POOLS.

ADULT MOSQUITOES CAUGHT, 1925.

Anopheles	...	...	...	...	...	207
Culex	...	...	...	...	...	35,034
Stegomyia	...	...	...	...	...	3

The *Anopheles* were caught in the following buildings which are searched weekly for adult mosquitoes:—

K.A.R. Depot	...	...	...	...	On 10 occasions
„ New Mess (above Dockyard)	...	„	10	„	„
„ House No. 1 (above Gerezani Creek)	...	„	—	„	„
„ Old Mess (South Lines)	...	„	13	„	„
Gerezani Road (House No. 2)	...	„	2	„	„
Kichwele Street—House of Mr. Friend	...	„	3	„	„
„ „ „ „ Mzee Hussein	...	„	—	„	„
„ „ „ „ Fundi Mika (outskirts)	...	„	4	„	„
„ „ „ „ Ahmed Abed do.	...	„	2	„	„
„ „ „ „ Abdulla Kilonda	...	„	2	„	„
European Hospital	...	„	1	„	„
Park Road—House of Mr. Fraser	...	„	5	„	„
Main Avenue—Dar es Salaam Club	...	„	2	„	„

COCONUT TREES.

Further searching of palm-tops by native mosquito finders was discontinued. Some investigations were pursued by Dr. Lester and will be published by him, regarding the structure of the tops of the palms and the possibilities of breeding therein.

MOSQUITO-BORNE DISEASES.

Malaria. 1.—A total of 1,132 cases of Malaria was notified, of which 742 were confirmed by blood examination. Only 23 cases were definitely ascribed to infection outside Dar es Salaam. The number of fresh infections is still regrettably high, due to the lack of action in regard to Gerezani and Msimbazi Valleys.

TABLE OF MALARIA NOTIFICATIONS.

Year	Type of parasite		Total confirmed by blood examination	Not confirmed by blood examination	Total	Percentage of total notifications confirmed by blood examination
	Sub-tertian	Benign Tertian				
1924	503	17	520	180	700	74%
1925	732	10	742	390	1,132	65.54%

12 cases of Blackwater Fever were notified.

2. Analysis of Township areas from which the confirmed cases were notified gives the following results:—

District	Notifications	Probable source of infection
Native Quarters, Kitumbini, Iliria Koo	225	Msimbazi
Arab Street	140	Gerezani
K.A.R. Mkongeni	75	Gerezani and Kurasini
School children	65	Various
Acacia Avenue	55	Gerezani
Kichwele Street	37	„ and Msimbazi
Selous Sreet	30	Various
Bagamoyo Street	12	„
Others	103	„
	742	

The figures show an increase of 61.71% in the number of cases notified compared with 1924, and a decrease of 8.46% in the percentage of cases confirmed by blood examination.

Mosquitoes. A number of mosquitoes, taken for the most part during 1924 and early 1925, were kindly identified by Mr. Edwards of the Natural History Museum, South Kensington.

Anopheles costalis: Specimens from Dar es Salaam, Kilwa (Mpara) 1924, Itigi 1922, Singida 1922.

Anopheles mauritianus: Specimens from Dar es Salaam.

Anopheles funestus: Specimens from Dar es Salaam, Kilwa (Mpara) 1924.

Meg. (Toxorhynchites) brevivalpis: Specimens from Dar es Salaam.

Lutzia tigripes: Specimens from Dar es Salaam.

Eretmopodites quinquevittatus: Specimens from Dar es Salaam (all from a land-snail shell).

Culex nebulosus: Specimens from Dar es Salaam.

„ *univittatus*: Specimens from Kilwa, 1924.

„ *fatigans*: Specimens from Dar es Salaam.

* „ *tritæniorhynchus*: Specimens from Dar es Salaam.

„ *aurantapex*: Specimens from Kilwa (Mpara) 1924.

* „ *perfuscus*: Specimens from Dar es Salaam.

„ *sitiens*: Specimens from Dar es Salaam.

* „ *trifoliatus*: Specimens from Dar es Salaam.

„ *simpsoni*: Specimens from Dar es Salaam.

**Mansonioides africanus*: Specimens from Dar es Salaam.

Aedes vittatus: Specimens from Morogoro, 1923.

„ *pembaensis*: Specimens from Dar es Salaam; all from crab holes.

„ *metallicus*: Specimens from Dar es Salaam.

**Mucidus scatophagoides*: Specimens from Dar es Salaam, 1921.

Aedes argenteus: Specimens from Dar es Salaam.

*These have not appeared before in any of the lists of Dar es Salaam mosquitoes available to the writer.

Natural enemies.—Two specimens of larvivorous fish from Gerezani Creek sent for identification to the British Museum through the Wellcome Bureau of Scientific Research have now been returned and identified as:—

Gobius criniger
Tilapia nilotica.

Other mosquito-borne diseases, Filariasis and Dengue. No records of incidence are available but active measures are taken against all breeding places of *Culex* and *Aedes* as they are found.

OTHER INSECT-BORNE DISEASES.

Plague. Valuable anti-plague measures were pursued by Mr. Humphrey until the end of the year; his report is inserted separately, see page 115.

RATS CAUGHT.

	Total rats caught	Average number of catchers employed	Average rats per catcher
1923	10,851	3	3,617*
1924	14,644	3	4,881
1925	23,154	4†	5,988

*Corrected figure.

†Includes one Askari trapping K.A.R. Cantonment from the month of June.

Rats caught: *Rattus rattus* 23,037
Rattus norvegicus 117

Total 23,154

Catchers employed 4
Average number of traps used daily 200
Total number of traps laid 67,640
Percentage of rats caught per 100 traps laid ... 34.24%
Cost (without overhead charges) Labour Shs. 908.00
Bait „ 114.00
Depreciation of traps „ 60.00

Total Shs. 1,082.00

Cost per rat caught 4.67 cents

TICK-BORNE DISEASES.

Relapsing Fever:

Medical Officer, European Hospital	Medical Officer, Sewa Hadji Hospital	Medical Officer of Health	Total
3 (European)*	8	1	12

*Reported to have been contracted as follows:—

One in the Belgian Congo.
„ „ „ Tabora District.
„ on „ Kilosa-Iringa Road.

Ornithodoros moubata has now been found in four native houses in Dar es Salaam; measures have been taken to eradicate them, and in one case the house was demolished and the ground burned over.

12 specimens of *O. moubata* were examined by the Director of Laboratory and none were found to be infected.

TUBERCULOSIS OF LUNGS.

							Cases notified	Deaths		
								Certified	Notified	Total
1923 ($\frac{1}{2}$ year)	...	...	...	...	...	...	9	17	3	20
1924	...	...	...	...	...	...	31	14	10	24
1925	...	...	...	...	...	...	52	16	6	22

PERCENTAGE OF DEATHS FROM TUBERCULOSIS OF LUNGS TO TOTAL DEATHS.

							Deaths from all causes	Deaths from Tuberculosis of lungs	Percentage of deaths from Tuberculosis of lungs
Certified deaths	...	...	...	...	...	...	222*	16	7.2
Notified	„	...	...	...	...	...	210	6	2.85
TOTAL							432	22	5.0

*Includes one certified death from Tuberculous Meningitis.
„ „ „ „ „ Tuberculosis, Spinal.

LEPROSY.

STATEMENT OF INMATES AT NUNGE LEPROSY SETTLEMENT FOR THE YEAR
ENDING 31st DECEMBER, 1925.

			Remaining on 31/12/24	Admissions during 1925	Total	Transferred to I.D.H.	Absconded	Died	Remaining on 31/12/25	Total
Male Adults	...	...	34	9d	42	1	3b	4	8	34
„ Children	...	...	3	...	3	2	...	...	2	1
Female Adults	...	...	33a	6	39	...	1c	3	4	36a
„ Children	...	...	1	...	1	...	...	...	...	1
TOTAL			71	15	85	3	4	7	14	72

- a. Including one non-leper.
- b. One of these patients was re-admitted to Settlement.
- c. Re-admitted to Settlement.
- d. Includes one re-admission from Infectious Diseases Hospital.

CLASSIFICATION OF PATIENTS AT NUNGE LEPROSY SETTLEMENT 31st DECEMBER, 1925.
(Muir's Method, see Tropical Diseases Bulletin 1924 Vol. 21 No. 11 page 371).

Nerve cases		Bacteriological cases*			Unclassified	Non-Leper	Total
(A1)	(A2)	(B1)	(B2)	(B3)			
33	34	4	...	...	...	1	72

*Includes all patients showing apparent infection of the skin apart from mere depigmentation, whether confirmed bacteriologically or not.
Some diagnoses are different from those of 1924 owing to nerve lesions supervening on bacteriological cases.

SUMMARY OF INFECTIOUS DISEASES NOTIFIED DURING 1925.

Diseases	By S.M.O., European Hospital	By M.O., Sewa Hadji Hospital	By Medical Officer of Health	By Private Practitioners	Total
Chicken-pox	79	15	96
Leprosy	4
Mumps	6
Measles	10	...	10
Spirillum fever	1	...	12
Tuberculosis (lungs)	52
Yaws	5,566
Influenza	68
Enteric	3

VACCINATIONS IN DAR ES SALAAM TOWNSHIP.

SUMMARY OF VACCINATION RESULTS, 1925.

	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Total
Total number vaccinated	301	197	32	38	116	144	28	90	717	547	419	325	2,954
Inspected on eighth day	248	99	18	15	32	9	10	29	230	206	43	38	977
Not inspected on or after 8th day	53	98	14	23	84	135	18	61	487	341	376	287	1,977
Successful	120	60	9	6	20	6	6	7	110	54	14	10	422
Modified	67	18	3	...	3	2	2	1	20	12	2	5	135
Negative	61	21	6	9	9	1	2	21	100	140	27	23	420
Percentage of successful and modified cases out of those re-inspected	75.4%	78.8%	66.6%	40%	71.8%	88.8%	80.0%	27.5%	56.5%	32.0%	37.2%	39.5%	57%

VACCINATIONS PERFORMED IN THE DAR ES SALAAM DISTRICT.

	Town	District	Total
1923	...	...	817
1924	17	1,788	20,791
1925	19,003	12,375	13,329

PORT HEALTH.

Ships cleared	...	...	...	...	...	323
Dhows cleared	...	...	...	...	...	766

No cases of Infectious Disease were found on vessels arriving in harbour.

The following steamers of the British India Line were quarantined at Zanzibar, on account of the occurrence of small-pox during the voyage from Bombay to the Coast:—

Name of Steamer	Date	Disease	Occurred in
Karoa	29.3.25	Smallpox	Deck Passenger
Khandalla	15.3.25	"	do
"	9.5.25	"	do
Karagola	5.5.25	"	Crew (Asiatic)

INFECTIOUS DISEASES HOSPITAL, DAR ES SALAAM.
RETURN OF DISEASES AND DEATHS (IN-PATIENTS) FOR THE YEAR 1925.

Diseases	Remaining from 1924	No. of patients admitted during '25	Total No. treated during '25	No. of deaths	Remaining at end of 1925
Chickenpox	3	62	65	...	...
Leprosy... ..	12	36	48	1	16
Malaria (confirmed) ... ..	...	4	21	...	...
Pulmonary Tuberculosis	8	13	9	6	5
Measles ... ..	...	9	4	...	...
Strongyloides Stercoralis, admitted for suspected tuberculosis ... ..	...	1	1	...	1
Under observation ... ..	...	8	8	...	...
Pyrexia of uncertain origin ... ..	...	8	8	...	...
Mumps ... ..	...	4	4	...	...
Pneumonia ... ..	...	1	1	1	...
Occupational Dermatitis ... ..	...	1	1	...	...
Chronic Bronchitis	1	...	1	...	...
TOTAL ...	24	147	171	8	22

Table showing Escape of Patients from Infectious Diseases Hospital, Dar es Salaam, owing to lack of adequate fence.

	Mumps	Tuberculosis of lungs	Leprosy	Total
1924	2	1	3	6
1925 ... ..	...	3	6	9

SANITATION.

SEWERAGE AND SEWAGE DISPOSAL.

It is hoped that the appointment of a sanitary engineer will allow at last of definite plans being prepared for a proper system of sewerage. The building activity which is taking place is multiplying the number of cesspits throughout the town and the ground surrounding them becomes less and less absorptive. Considerable increase of pumping plant will be necessary to deal with this increased amount of sewage; 921,750 gallons of cess were removed by the motor lorries during the year.

The standard of new house drainage is good on the whole and the Township Authority is able to obtain the installation of satisfactory sanitary fittings in all new buildings.

The large range closet accommodating twelve persons at the Police Barracks was completed early in the year and is working very satisfactorily indeed.

REFUSE DISPOSAL.

No change in the method of collecting and disposing of refuse in open incinerators has been made. 73 ox-cart loads of refuse were burned daily. A motor lorry is expected for this service during 1926.

WATER SUPPLY.

Some progress has been made by the Public Works Department in this direction, 4317 feet of three inch main having been laid, and a new deep well sunk and brought into operation at Gerezani. 23 new buildings were connected to the main during the year, and eleven applications for connection had to be refused. The number of standpipes in the native quarter remains the same as last year (nine). These should be increased in number as early as possible, since undoubted inconvenience to the public in standing waiting their turn at the standpipes and public wells results.

FOOD INSPECTION.

This service has been vigorously tackled during the year and numbers of unsound foodstuffs, including particularly tinned goods and meat, have been voluntarily surrendered or seized.

FOOD POISONING.

Two outbreaks of apparent food-poisoning were reported; one about May and one in November. Both outbreaks originated in the New Africa Hotel. On investigation the first outbreak was traced to the consumption of Prawns, and the second to the consumption of Crayfish. In the case of the Crayfish it was definitely ascertained that all the fish were alive when purchased the previous day. In all cases where the "patient" was questioned it was stated that the fish in question appeared nice and fresh when served. The Hotel is inspected regularly, and on no occasion has there been cause to criticise the method of preparing and serving the food.

FOOD SAMPLES SENT TO LABORATORY.

Ninety-seven samples of foodstuffs were sent to the Laboratory for examination. The foodstuffs were as follows:—

Milk	...	...	...	...	...	51 samples
Meat	...	...	...	...	...	8 „
Aerated water			...	...	...	23 „
Potted meats	...	...	...	...	...	1 „
Butter	...	...	...	...	...	2 „
Water	...	...	...	...	...	5 „
Preserved fruits			...	...	...	7 „

MILK.

Six samples of milk contained less than 3% of fat, and six samples (other than the above) contained less than 8.5% of "solids other than fat."

One vendor was prosecuted and fined Shs. 10/- for selling milk containing less than 3% of fat. This was his second offence.

The following table shows the average composition of 80 samples of milk taken in Dar es Salaam:

Specific Gravity.	Total Solids.	Solids fat.	Solids non-fat.
1029	13.35	3.74	9.70

The total solids and non-fatty solids are rather high, but the Specific Gravity and the fatty solids are about correct in comparison with the United Kingdom averages. It would appear that the high non-fatty solids indicate pollution with extraneous matter.

Average of five samples taken from Government cattle:—

Specific Gravity.	Total Solids.	Solids fat.	Solids non-fat.
1029	12.94	4.00	8.94

MEAT SAMPLES.

In five samples *Cysticercus bovis* was found.

BUTTER.

One sample of butter contained 19.4% of water. A letter was sent to the vendor informing him that this amount of water exceeded the legal limit in England.

MEDICAL INSPECTION OF SCHOOL CHILDREN AT THE GOVERNMENT SCHOOL.

The average number of scholars on the roll was 252: the average daily attendance was 206. The Health Visitor has continued her daily visits and very satisfactory work is being done. A new clinic is being erected at the school which will render the work of inspection and treatment much more pleasant.

New sanitary conveniences are badly needed at the school, both to eliminate the danger of fly-borne infection from the dry pan system in use, and to act as a practical lesson in hygiene to the scholars.

It will be seen from the table below that Ulcers cause nearly double the number of attendances from any other cause.

The amount of scabies is also unduly large and owing to the unsatisfactory home life of so many of the children it is difficult to prevent constant re-infection after treatment.

Seventy-four children received dental treatment. It has not yet been possible to arrange for a regular system of inspection by the Dental Surgeon which is undoubtedly necessary.

The card index system of inspection is being carried on successfully.

The diseases treated are summarized below:—

[illegible]

TOWN PLANNING AND TOWNSHIP AUTHORITY WORK.

The appointment of Mr. Morgan as Building Inspector on 18th March on transfer from the Public Works Department has been of the greatest value to the Township. He has found that his duties are very largely instructional as well as inspectorial owing to the poor knowledge of building construction possessed by many of the contractors in the Township, in addition to the universal desire to evade building regulations and to sacrifice safety for cheapness. Real progress is being made, however, and building activity is marked.

The Clerk to the Township Authority arrived in December and this appointment will relieve the Medical Officer of Health of the clerical work which he has hitherto had to perform.

Number of houses (stone, etc.) completed and certified ...	13
„ „ Government houses „ „ ...	5
„ „ houses of native construction erected ...	146
„ „ permits issued for the construction of new privies	347

LICENSED TRADES.

Improvement of the premises in which these are carried on has been steadily maintained and much greater control is now exercised over the milk and food trades than was possible before. Mr. Humphrey, who possesses the Meat and Food Inspector's Certificate, deserves great credit for much difficult and unpleasant work which he has performed in connection with this work.

SUMMARY OF LICENSED TRADES.

Trades requiring Licenses.	Total No.	Licences	Provisional Permits	Not Licensed
Eating Houses	28	28	...	...
Aerated Water Manufacturers	2	2	...	...
Ice Cream } Shops	12	12	...	...
Cool Drink }				
Milk Shops and Sellers	29	7 Shops	22 Sellers	...
Cowsheds	9	2	2	5
Bakers and Confectioners... ..	14	14	...	...
Laundries (Gerezani)	19	19	...	...

Trades requiring permits.	Total No.	Permits	No permits
Soap Boilers	4	4	...
Ghee Manufacturers	Nil	Nil	Nil
Hide Factors	13	13	...
Camel Oil Mills	8	8	...
Premises for the keeping of Horses, Cattle, Sheep, Goats, and Pigs }	Not yet investigated.		
Stores for Sisal, Raw Cotton, Cotton seed or any seeds, grain or other parts of plants intended for consumption as food or fodder or for sale or export. }	Ditto.		

REPORT ON THE HEALTH OF TANGA FOR THE YEAR 1925.

BY DR. R. NIXON, M.B., D.T.M., D.P.H., SANITATION OFFICER, TANGA.

Although the European population has increased by immigration the numbers of deaths, European and African, in the township and in the sub-districts, are the lowest yet recorded.

Of serious infectious disease there was one imported case of smallpox, eight cases of enteric with no deaths and forty-three cases of anthrax with twelve deaths. The anthrax epidemic occurred in the Moa sub-district during December. All the records indicate a reduced incidence of hookworm disease particularly in the township but also in the sub-districts.

The cases of sickness treated at Tanga Hospital are in excess of those of previous years but most are minor cases and the number of deaths shows a considerable reduction. The mosquito-breeding index and the house incidence of mosquitoes during 1925 are considerably the lowest yet recorded in Tanga but must be ascribed in quite large part to the low rainfall of the year. The heavy rain in October was accompanied by a slight rise in the Anopheline and the malaria indices and the malaria cases for the year are slightly in excess of those of 1924.

The main sanitary requirement of the town is an improved water-supply.

VITAL STATISTICS.

Europeans:—

The comparative figures of the last three years are:—

					1923	1924	1925
Population,	...	...	...	...	255.	267.	327.
Births,	...	...	...	...	5.	7.	8.
Birth-rate,	...	...	...	...	19.7	26.2	24.5
Deaths,	...	...	...	...	7.	5.	4.
Death-rate,	...	...	...	...	27.4	18.7	9.2

Two of the deaths occurred in Tanga Hospital (one from appendicitis and one from toxæmia) and the other in an outlying estate, the post-mortem diagnosis being malaria.

European Sickness.

305 cases of European sickness were treated at Tanga Hospital during the year as compared with 214 in 1924 and 302 in 1923.

They include 2 cases of enteric, 4 cases of amoebic dysentery and 2 of bacillary dysentery.

Numerically the most important lesions were:—

Malaria	...	...	...	...	...	45
Minor intestinal lesions	...	...	...	...	...	44
Influenza and catarrh	...	...	...	...	...	30
Minor skin lesions	...	...	...	...	...	28
Dental caries	...	...	...	...	...	17
Ear lesions	...	...	...	...	...	16
Wounds, bruises and sprains	...	...	...	...	...	15
Ulcers	...	...	...	...	...	14

African Births and Deaths.

The following table is compiled from the Akidas' returns, which are unreliable, and is given for comparative purposes only, on the assumption, perhaps unjustified, that the factors of error are approximately the same in different years.

			Births	Deaths	Birth-rate	Death-rate
1922	...	...	965	1335	11.6	18.8
1923	...	...	1047	1274	11.1	15.4
1924	...	...	963	1144	11.2	14.7
1925	...	...	893	948	10.3	10.9

Both births and deaths, particularly the former, are certainly estimated. The table's only value is in the comparisons.

ANTI-MOSQUITO MEASURES.

The routine anti-mosquito work has been considerably extended. The comparative figures are as follows:—

Number of Inspections:—

						1924	1925.
Houses and compounds	...	...	...	...	...	65,667	133,536
Drains	...	...	...	...	...	14,365	17,193
Pits	...	...	...	...	...	70,656	131,886
Wells and waterholes	...	...	...	...	...	8,378	21,418
Tanks and barrels	...	...	...	...	...	115,724	261,623

The collections of mosquito-larvae found during the last three years are:—

1923	...	...	...	...	...	2,486
1924	...	...	...	...	...	3,664
1925	...	...	...	...	...	4,022

The mosquito-index (collections of larvae per hundred inspections of premises) is considerably the lowest recorded since systematic searching was adopted. The indices are:—

1923	...	...	...	...	...	5.2
1924	...	...	...	...	...	5.6
1925	...	...	...	...	...	3.0

The analysis of the collections of 1925 is as follows:—

			Culex.	Steg.	Anoph.	Others.	Total.
In household receptacles	...	...	807	1,373	38	5	2,223
„ casual water	...	...	623	451	70	8	1,152
„ wells and waterholes	...	...	381	106	25	3	515
„ pits	...	...	121	8	0	3	132
			1,932	1,938	133	19	4,022

The collections, therefore, consist of:—

Stegomyia	...	...	...	...	...	48.18%
Culex	...	...	...	...	...	48.04%
Anopheles	...	...	...	...	...	3.31%
Others	...	...	...	...	...	.47%

The above table for clearness can be condensed to a percentage basis roughly as follows:—

				Culex	Steg.	Anoph.	Total
In household receptacles	...	...	...	20	34	1	55
„ casual water	...	...	...	16	11	2	29
„ wells and waterholes	...	...	...	9	3	1	13
„ pits	...	...	...	3	0	0	3
				48	48	4	100

Owing to the failure of the heavy rains in April and a compensatory increase in the rainfall of the later months of the year the mosquito-incidence curve of 1925 is an extraordinary one. During the first seven months of the year mosquitoes were exceptionally few and the curve touched its minimum in April and May, the months which normally show the highest incidence. The curve touched its maximum in October, the rainiest month of 1925, and during the last three months of the year house-incidence of mosquitoes was higher than in the early part of the year. Towards the end of December, however, the incidence was again low.

There is no doubt that, taking the year as a whole, 1925 has been, from an anti-mosquito point of view, the best year the town of Tanga has had since the war.

MALARIA.

The cases of malaria treated at Tanga Hospital show an increase on last year's figures in spite of the decrease in mosquitoes. The comparative figures are:—

	1923	1924	1925.
European cases	55	34	50
Non-European cases	1,151	762	1,210

Very few of the European cases are primary attacks and it remains extremely rare for malaria infection to be acquired within the European town.

SMALLPOX.

Although Tanga has been in regular communication with Mombasa by sea and Moshi by rail, both of which have been heavily infected with smallpox during the year, one case only has been imported into Tanga and no local case developed from this.

The imported case was a man from the border of the Moshi district who arrived in Tanga by train on June 16th with a well-developed attack of the disease. He was apprehended at the station, isolated with contacts in the Infectious Diseases Hospital and was discharged on his recovery 20 days later. No second case occurred.

The smallpox record of Tanga district from 1920-1925 is:—

	1920	1921	1922	1923	1924	1925.
Cases ...	1,823	412	82	81	0	1
Deaths ...	752	136	14	16	0	0

4,444 vaccinations were performed at the Health Office during the year but, as the large majority were travellers, the results are uncertain. The percentage of natives in the district who have now been vaccinated is high.

ANKYLOSTOMIASIS.

All the records indicate a diminished incidence of hookworm, particularly in the township but also in the sub-districts.

Tanga Hospital figures are as follows:

	1924	1925.
Number of cases	1,365	1,176
Percentage of total cases	14	8
Number of deaths	50	28
Percentage of total deaths	50	35

Tanga Government School figures are:—

	1924	1925.
Number of cases	54	26

26 cases in a school of 350 boys, none of whom were so heavily infected as to be in any danger, indicates that amongst the natives in the town, at any rate those with discipline and some knowledge of hygiene, hookworm has ceased to be a serious menace. Tanga schoolboys cannot, of course, provide a reliable index of the prevalence of the disease throughout the district.

The akidas of the sub-districts make a monthly return of the deaths in their districts. Very little reliance can be placed on their diagnosis and a brief extract only is given.

	1921	1922	1923	1924	1925.
Number of deaths attributed to hookworm	444	284	189	241	149
Death-rate per 1,000 due to hookworm ...	5.2	3.3	2.2	2.8	1.7
Percentage of total deaths attributed to hookworm	28	21	15	21	15

During 1926 a campaign will be started at Muheza, a town in the centre of a sub-district from which is reported a high incidence of ankylostomiasis. It is hoped that there will be an even more marked reduction of the disease by the end of the year.

SCHISTOSOMIASIS.

100 cases of schistosomiasis were treated at Tanga Hospital as compared with 107 in 1924. 49 cases occurred in the Government School as compared with 27 last year. July and August—dry months—were the months of highest incidence. Search has failed to reveal *Bullinus* in the district or any suspicious water condition common to any large group of cases. The generally accepted aetiology of this disease does not appear to cover the Tanga cases.

BERIBERI.

The drought of the early months of the year resulted in failure of crops and deficiency of food in the districts. It was not surprising to find deficiency disease in Moa, Muheza and elsewhere and 38 cases of beriberi were admitted to Tanga Hospital.

To obviate a recurrence certain estates have arranged to hold large stocks of food in future and to pay their labour a food ration in lieu of part of their wages.

ANTHRAX.

An epidemic of anthrax broke out round Kilulu, a cattle district with scattered villages, during December. Of 43 natives attacked 12 died within 48 hours of the appearance of the pustule. The cases were segregated and visited from Tanga. Of the other 31 cases, 2 have extensive but healing ulceration and the remaining 29 made a complete recovery.

The epidemic appears to have run its course at the end of the year.

TETANUS.

Three cases of tetanus occurred during the year, all fatal. Similar sporadic cases were reported in Tanga in 1918 and in 1922.

Operation cases and wounds now receive routine injections of anti-tetanic serum.

YAWS.

630 cases are reported as compared with 409 last year. No deaths occurred and the majority of cases under treatment were cured or improved. The more infectious cases have been housed in the Infectious Diseases Hospital while under treatment. Of 69 cases admitted to hospital 64 have been discharged cured.

PULMONARY TUBERCULOSIS.

57 cases with 20 deaths are reported as compared with 37 cases and 8 deaths last year. A probable factor in the increase is the epidemic influenza of 1925.

INFLUENZA.

Numerically influenza and bronchial catarrh dominate the sick returns of the last six months. The disease is, however, of a mild type (about a week of low fever with catarrh and depression) and no death has been ascribed to it.

The cases under treatment numbered 30 Europeans and 1,847 Non-Europeans. The European figure is an under-estimate for many cases did not report sick with the attack.

INFECTIOUS DISEASES HOSPITAL.

The admissions to the I.D.H. during 1925 were:—

Smallpox	...	...	...	...	...	...	...	...	1
Smallpox contacts	...	...	...	...	...	...	...	...	3
Chickenpox	...	...	...	...	...	...	...	...	6
Pulmonary Tuberculosis	...	...	...	...	...	...	...	...	11
Yaws	...	...	...	...	...	...	...	...	38

3 deaths occurred, all from pulmonary tuberculosis.

PORT HEALTH WORK.

The port work has increased, 200 steamers and 697 dhows having been cleared during the year as compared with 154 steamers and 609 dhows in 1924.

No infectious disease has entered the town through the port during the year.

VETERINARY WORK.

In the absence of any veterinary official the care of the slaughter house and routine meat inspection has fallen on this office. A detailed report on the meat inspection has been sent to the Chief Veterinary Officer. The following is a short summary of the work:—

Animals inspected	...	...	...	...	...	2,110 bullocks
						3,166 sheep
						3 pigs
Carcases condemned	...	...	...	...		5
Portions condemned	...	...	...	...		484 livers
						150 lungs
						74 stomachs
						116 other portions.

NATIVE HOUSING AND TOWN PLANNING.

The supervision of building and the alignment of houses has fallen entirely under this office during the past year. 368 permits to build and 373 permits to repair have been issued and all these sites and houses have been inspected. On the whole the native town contains good houses in good alignment but much remains to be done on its outer fringes particularly in the Tabora Street district.

The arrival of the District Surveyor in December has already proved of value in the native town planning.

ARBORICULTURE.

Although Tanga has far too many trees and a removal of existing ones is more desirable than the planting of new there are certain lines of trees in the town which should certainly be maintained. King Street and Market Street require shade trees but the present ones are degenerated and unsightly. During the year Acacia seedlings have been planted at intervals for about 400 yards of King Street, and also round the Market Square. It is hoped that, when these are old enough, many of the degenerated existing trees can be removed.

REFUSE COLLECTION.

During the year 18,854 cartloads of refuse have been collected and burnt at the incinerators.

The products of incineration have been used mainly for the filling of the Hospital Road and Nahoza Street swamps.

GRASS-CUTTING AND DRAIN-CLEANING.

During the year 3,970,000 square yards of grass-cutting and 870,000 linear yards of drain-cleaning has been performed by this Office.

EDUCATION.

Two sanitary inspectors at this office (David Marks and Petro Kukuti) sat for the examination in elementary hygiene and satisfied the examiners.

16 probationer district sanitary inspectors have been trained at this office during the last four months and are now ready for posting to out-stations.

A report on Tanga Government School is contained in an appendix.

METEOROLOGY.

The rainfall of 1925 was extraordinary. Very little rain fell between March and May, which is normally far the rainiest period of the year, and the wettest month was October, normally the driest.

						Rainfall in	Temperature.		
						inches.	Maximum.	Minimum.	Mean.
January	...	...	...	...	...	3.9	30.3	25.5	27.3
February	...	...	...	...	...	1.6	29.6	25.8	27.5
March	...	...	...	...	...	1.7	30.4	25.9	28.1
April	...	...	...	...	...	1.9	30.5	27.0	28.9
May	...	...	...	...	...	2.1	29.3	25.6	27.2
June	...	...	...	...	...	4.2	28.2	23.4	25.6
July	...	...	...	...	...	2.8	27.2	23.6	24.7
August	...	...	...	...	...	5.4	27.2	22.6	24.2
September	...	...	...	...	...	2.2	27.6	22.1	25.4
October	...	...	...	...	...	10.5	28.8	24.3	26.6
November	...	...	...	...	...	2.8	29.4	25.3	27.3
December	...	...	...	...	...	5.9	30.1	25.7	27.8

The total rainfall of the year is 45.0 inches as compared with 45.5 inches in 1924.

RETURN OF STATISTICS OF POPULATION FOR THE YEAR.

						Europeans	Africans	Asiatics
Number of inhabitants in 1924	...	...	...	...	...	267	86,423	2,447
„ „ births during the year 1925	...	...	...	...	...	8	893	...
„ „ deaths „ „ „ „	...	...	...	...	...	3	948	30
Immigrants during the year 1925	...	...	...	...	...	125	...	...
Emigrants	...	...	...	...	...	70	...	...
Number of inhabitants in 1925	...	...	...	...	...	327	86,368	2,447
Increase of inhabitants in 1925	...	...	...	...	...	60	...	...
Decrease	...	...	...	...	...	...	55	...

The native population as estimated by the administration from tax returns is 105,000.

Year						Number of Natives		Number of Europeans		Totals
						Male	Female	Male	Female	
1923	...	...	...	...	...	8,000	8,023	105	45	16,173
1924	...	...	...	...	...	7,990	8,013	110	45	16,158
1925	...	...	...	...	...	7,990	8,000	135	55	16,180

These figures are rough estimates only.

REPORT ON THE HEALTH OF TANGA GOVERNMENT SCHOOL FOR 1925.

There is again marked progress to record for the year. The water-supply has been improved by connection to the railway main supply. The schoolboys' latrines have been reconstructed and a native water-closet system installed.

Regular football has been organised and supervised and although four minor fractures and numerous bruises have resulted no boy has received any permanent damage and the games have certainly produced a real improvement in the spirit, manners and the health of the school.

Gymnastic equipment, including rings, bars and giant's stride, has been erected in the school playground and is in regular use by the boys.

Drill and bathing parades are carried on as in 1924.

School Dispensary.—There were 2068 cases under treatment as compared with 1711 last year but as the number of scholars increased from 300 to 350 the rate of attendance at sick parade remains much the same. The bulk of the cases are very minor cases; cuts and bruises, small ulcers, coughs and colds and minor intestinal disturbances are the predominant lesions.

The following are the most interesting of the comparative figures:—

							1924	1925
Malaria	...	...	...	...	...	...	93	109
Influenza	...	...	...	...	...	...	5	121
Schistosomiasis	...	...	...	...	...	...	27	49
Yaws	...	...	...	...	...	...	12	48
Ankylostomiasis	...	...	...	...	...	...	54	26
Filariasis	...	...	...	...	...	...	15	15
Gonorrhoea	...	...	...	...	...	...	11	8

There has been no small-pox, mumps or measles and one case only of chicken-pox during 1925.

The monthly incidence of the more important diseases was as follows:—

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Malaria	8	10	5	2	—	8	6	5	2	32	19	12
Influenza	2	—	—	—	—	44	29	8	3	15	3	12
Schistosomiasis	1	3	2	2	—	—	13	16	5	6	1	—
Yaws	2	6	6	5	2	8	5	—	1	2	7	4
Ankylostomiasis	2	5	2	2	—	1	5	1	2	6	—	—
Filariasis	1	1	1	1	—	—	4	1	3	—	4	1

Malaria.—109 attacks of malaria in a year in a school of 350 must be considered a satisfactory record. Except during October, the rainiest month of 1925, the duty lost through malaria was almost negligible. The low incidence of last year has been maintained.

Influenza.—Influenza attacked the school in mildly epidemic proportions after the holidays. Both school and town have shown several cases monthly up to the end of the year.

Schistosomiasis.—I have not been able to find *Bullinus* in Tanga nor any suspicious water condition common to the infected 49 scholars. July and August were the months of highest incidence and also months of drought when fresh water was not commonly used for bathing. Most of the infected during these months stated that they bathed only in the sea. It would seem that there is another than the accepted method by which the schistosome enters the human body.

Yaws.—The yaws incidence has increased but the infected have all received injections and have recovered from the disease.

Ankylostomiasis.—This is a surprisingly low figure for an area generally believed to be heavily infected. Of course the schoolboys, some living in the school and most living in the town, do not accurately reflect district conditions. It is however, gratifying to note the low incidence and the reduction.

Filariasis.—These are disappointing cases and some have had to leave school owing to their inability to perform sustained work.

Smallpox and Vaccination.—All boys who appeared inadequately protected have been vaccinated or re-vaccinated during the year.

In spite of the Moshi epidemic one case only occurred in the town and none in the school.

EXTRACT FROM THE ANNUAL SANITATION REPORT FOR THE YEAR 1925.
FOR THE TABORA DISTRICT.

By DR. A. I. MEEK, L.R.C.P., L.R.C.S., D.P.H., L.R.F.P., & S.,
SANITATION OFFICER, TABORA.

(I) ADMINISTRATION.

The Sanitation Staff consists of:—

(a) Sanitation Officer	...	...	...	...	...	1
(b) European Sanitary Superintendent	...	...	...	...	...	1
(c) Native Sanitary Inspectors	...	...	...	...	...	16
(d) Native Vaccinator	...	...	...	...	...	1
(e) Sanitary Labourers—average	...	...	...	...	...	89

Maternity and Child Welfare Centre:—

(a) Nursing Sister	...	...	...	...	...	1
(b) Ayah	...	...	...	...	...	1

MOVEMENTS OF STAFF.

Doctor Suffern was in charge until the arrival for duty of Dr. A. I. Meek on the 27th March, 1925.

Mr. C. Harlen, Sanitary Superintendent, arrived for duty from Dar es Salaam on the 11th September, 1925, in relief of Mr. T. Bell, Sanitary Superintendent, who proceeded on leave to England on 22nd September, 1925.

Miss A. L. Ryder, Nursing Sister, arrived for duty to establish a Child Welfare and Maternity Centre in Tabora on the 4th October, 1925.

13 Natives were trained as District Native Sanitary Inspectors from the 1st August to the 25th November, 1925, and were then posted to the out-districts for duty.

GENERAL NATIVE POPULATION.

VITAL STATISTICS.

Approximate Native Population—Tabora Township 20,000

African Native Births Notified (<i>Month of December only</i>)	...	...	17
African Native Deaths under one year notified in December	...	...	3
African Native Infantile Mortality figure for December	...	...	176
African Native Deaths notified for the year	...	...	218

(125 by Akidas and 93 by Tabora Hospital).

African Native Death Rate per 1,000 living ... 10.9

Notification of Births and Deaths is now compulsory and appears to be reliable.

PREVENTIVE MEASURES.

Mosquito and Insect Borne Diseases.

ANTI-MOSQUITO WORK. (INCLUDING OUT DISTRICT WORK).

Malaria :—

Premises inspected	...	...	...	...	...	45,612
Collections of larvæ found	...	...	...	...	...	2,317
Anopheline	...	...	...	...	...	41%
Culex	...	...	...	...	...	49%
Stegomyia	...	...	...	...	...	10%
Prosecutions	...	...	...	...	...	4
Convictions	...	...	...	...	...	4
Notices served for Mosquito Nuisances	...	...	...	...	...	9
Drains inspected	...	...	...	...	...	5,378
Cesspits and Soakage pits inspected	...	...	...	...	...	47,214
Pools inspected and oiled	...	...	...	...	...	5,611
Wells inspected	...	...	...	...	...	4,689
Tanks and Barrels inspected	...	...	...	...	...	106,894

Yards of drains cleared	...	...	...	...	...	20,544
Yards of new drains dug	...	...	...	...	...	6,040
Holes and excavations filled in	...	...	...	...	...	63
Gallons of Kerosine used	...	...	...	...	...	141

From January to May the rains were small and larvae collections were found only in the swampy areas of Kitete, Rufita and Chem Chem.

The months of June to October were dry and the swamps dried up with the exception of the larger pools; and even most of the latter disappeared in September and October so that the Township was particularly free from mosquitoes during these months.

Several defective soakage pits were found to provide culex mosquitoes with a suitable breeding place and a few collections of larvae were also obtained from wells and compounds.

The phenomenal rains of November and December were responsible for nearly three-quarters of the total collections for the year. All low-lying places were water-logged and provided myriads of natural breeding places for anopheles. A special mosquito brigade campaign under the personal supervision of the Sanitation Officer and Sanitary Superintendent was organised in December when 3,450 pools were inspected and oiled, 1,471 collections of larvae were found in pools, 36 in compounds, 32 in drains and 14 in wells, making a total of 1,553, 45% of which were anopheline. 46 gallons of kerosine had to be used in order to cope with the situation.

A scheme for the drainage of the Kitete and Chem Chem swamps was submitted by the Executive Engineer and a special vote applied for to cover the cost of same.

TICK FEVER—ANTI-SPIRRILLUM WORK.

46 collections of *Ornithodoros Moubata* were found during the year. Five of these were collected at the K.A.R. cantonment, including two collections from quarters occupied by European other ranks, two from servants' quarters and one from the porters' Lines. The European quarters, being in a very bad state of repair, were demolished, the servants' quarters repaired and the porters' huts plastered inside with a mixture of cow dung and clay every month as a preventive measure.

The remaining 41 collections were found in Asiatic and Native dwellings in the Township. The dilapidated dwellings concerned were demolished.

A total of 7 dilapidated buildings and 131 native huts were demolished during the year. 5 buildings and 16 native huts were demolished by the owners. The Public Health Department carried out the work of clearing away the remainder.

Epidemic Diseases.

Smallpox:—

During the year 3 Native and 1 Asiatic cases of smallpox were notified at Tabora, 3 native cases at Shinyanga, and 2 native cases at Kahama. 1 native died at Tabora and 1 at Shinyanga. The cases occurred during the months of September and October.

The first two cases at Tabora were found to have contracted infection at the Kasulu sub-district of Kigoma, the remaining two (including Asiatic) in the township. The later two cases were concealed and were noted during the course of house to house inspection.

The following preventive measures were carried out:—

1. Four cases and 36 immediate contacts were isolated at the Tabora Quarantine station.
2. Appropriate disinfection measures were carried out.
3. Vaccination of contacts, immediate and remote.
4. House to house inspection and vaccination where necessary.
5. Inspection and vaccination when necessary of all in coming and outgoing

Native and Asiatic travellers by trains.

6. Inspection and vaccination of all travellers to and from the out-districts.

7. Inspection and vaccination of personnel attached to K.A.R.'s, Police and Prisons, School, Railway, Public Works, Health Department, Political, Postal Department, etc.

8. Circulars were issued throughout the township with regard to the concealment of infectious disease and in connection with the inspection and vaccination of travellers, etc.

4644 vaccinations were performed at the Railway Station and Health Office (September—December).

1017 Travelling Permits were issued at the Health Office (September—December).

During the year a total of 27,368 vaccinations were performed in the district.

64.4% of those vaccinated were re-examined; of this number 74.8% of successful results, 14.8% of modified successful and 10.4% of failure were noted.

The Public Works Department completed the four-roomed, stone-built hut and fenced in two compounds for the quarantine of smallpox patients and contacts. 14 grass bandas, an incinerator, disinfector and latrines were also erected by the Health Department.

Chickenpox.—43 cases were notified from the Township including 1 European and 27 cases at the Government School. 18 cases were notified from the out-districts.

The cases were isolated and other preventive measures carried out.

Mumps.—29 cases were notified in the Township—including 23 cases at the Government School. The cases were isolated and other precautionary measures taken. It has been noted that these cases do not exhibit the orthodox clinical picture of mumps, in that the glandular swelling is in most cases more prominent in the sub-maxillary region and at no time has orchitis been known to develop, as observed by the Senior Medical Officer, Tabora. The disease however appears to be infectious.

Influenza.—3 cases were notified from the Shinyanga district.

Typhoid Fever.—One case (European) contracted infection in the Township, one Asiatic Railway driver, and three Native K.A.R. askaris in the out-districts. One Asiatic death was notified.

A supply of T.A.B. Vaccine has been obtained and a notice circulated, advising European and Asiatic residents to become inoculated. Very few Europeans appeared to be willing to take advantage of this means of protection. At the end of the year however, several Europeans and a large number of Asiatics signified their willingness to become inoculated, and this work is now being carried out. No inoculations were performed during 1925.

Helminthic Diseases.

Bilharzia.—An attempt was made to ascertain the incidence of Urinary Bilharzia among natives. The urines of young school children at Tabora and Usoke and adult prisoners at Tabora Gaol were examined. 35% of children and 15% of adults were found to be infected with *Schistosoma haematobium*. 77 cases in all were noted as follows:—

A. YOUNG SCHOOL CHILDREN.

				Number Examined.	Number Infected.
Tabora Government School	...	...	...	88	37
Usoke Government School	...	...	...	61	19
Native School—Rufita, Tabora	...	...	...	15	2
Native School—Main Street, Tabora	...	...	...	11	4
				<hr/> 175	<hr/> 62

B. ADULTS.

						Number Examined.	Number Infected.
Tabora Prison	...	...	...	...	...	100	15

The infected school children seen at Tabora included cases having their origin in Tabora, Shinyanga, Kahama and Nzega. About half the number of these cases appeared to have been infected at Shinyanga.

At Tabora collections of Fresh Water molluscs were found in pools at Rufita, Mwanza Road, Main Street, and Chem Chem. These were forwarded for identification to Dr. Corson, Acting Director of Laboratory, Dar es Salaam. Two species were identified as *Isidora nasuta* (found in the four above districts) and *Lanistes ovum*—Peters.

Of the snails dissected at Tabora, forked-tailed cercariae without eye spots were noted in *Isidora nasuta* from the Rufita pool. The majority of cases having their origin at Tabora appeared to have been infected at this pool.

GENERAL MEASURES OF SANITATION.

Railway Sanitation:—ITIGI TO KIGOMA.

An inspection of the line from Itigi to Kigoma was carried out.

The general cleanliness of station premises was found to be satisfactory. Recommendations were given for the improvement of Asiatic and Native latrines, sanitation of gang camps, wells, etc., and structural alterations to several station buildings.

Mosquitoes have been found breeding in large numbers in the Railway area at Tabora and preventive measures carried out by this Department. The swampy area at Rufita was mainly responsible.

Breeding places for mosquitoes also appear to be in evidence at many of the other stations but principally at Malagarasi.

From January to August a Railway Sanitary Inspector (European) was stationed at Tabora to attend to the sanitation of the line from Itigi to Kigoma. From September to December there was only one European Sanitary Inspector stationed at Morogoro for the whole line from Dar es Salaam to Kigoma, consequently the sanitation had to be left more or less under Native supervision at Tabora. Frequent visits, however, were made by the staff of this office, especially to the swampy area around the station and at Rufita, to ensure that known breeding places for larvae were kept oiled or drained. An arrangement was made for the District Engineer to supply the necessary kerosine for this purpose.

The District Engineer (Railways) was asked to submit a scheme for the better drainage of swampy areas within the Railway boundaries.

TOWNSHIP AUTHORITY WORK.

The following were the principal subjects brought up for consideration and work carried out:—

Wattle and daub huts for servants not to be erected in connection with European dwellings.

An area of land in the vicinity of European houses at School and Mission Streets was cleared of native huts and pombe shops in order to create an open space between Residential and Native areas.

A complete survey of the Township is in the course of preparation. Owing to the fact that only one Survey Officer is available for the district, a considerable time must elapse before completion.

A standard type of two, three and four-roomed hut with corresponding standard size of compound was instituted and applied with reference to new huts built during the year. The District Surveyor in conjunction with the Sanitation Officer made weekly inspections in the Native area and endeavoured to clear up congested areas and lay out plots for new huts.

A section of the Chem Chem area in the native village to be laid out into standard plots and utilized for the future extension of the native building area.

The Railway Department was asked to give a definite decision as to the boundaries of their land at Tabora. This was necessary in order to prevent the encroachment of native building area on to Railway land and to enable the Authority to retract the Township boundaries within a definite workable area.

The site for the Child Welfare Centre on the plot of ground at the west end of School and Mission Streets was approved.

Sites for Transport Office and Store building for the storage of petrol chosen.

Improvement to Railway Asiatic Quarters sanctioned.

Site for Goanese club selected.

Directions of proposed new water mains for the supply of the native township decided upon.

Site for procuring "clay" for the building of native huts chosen.

Improvements in connection with the slaughter, transport, and sale of meat carried out.

Arrangements for the pounding of stray animals instituted.

Improvements to roads submitted by the Executive Engineer, Public Works Department, approved.

Agreed that when funds are available a milk supply centre should be established.

Permit to erect a groundnut crushing factory granted.

A native building inspector was attached to the Township Authority for duty in connection with native buildings.

New buildings erected	...	...	...	...	...	...	10
New huts erected	...	...	...	...	...	...	38
New kitchens for native huts erected	...	...	...	...	...	...	42
Repairs to native huts approved and carried out	...	...	...	...	...	...	771
Houses demolished	...	...	...	...	...	...	7
Native huts demolished	...	...	...	...	...	...	131
Prosecution for building hut without permission	...	...	...	...	...	...	1
Prosecution for keeping animals in hut without permission	...	...	...	...	...	...	1

(both cases convicted).

CEMETERIES.

All cemeteries were maintained in a clean condition by this department during the year.

The issuing of Burial Permits was commenced in the month of May. 132 were issued during the year.

43 burials were performed by this Department.

A cemetery at Urambo was laid out for native burials. Unfortunately this cemetery was waterlogged during the heavy rains of November and December and unfit for burials at that period.

A new native cemetery was laid out at the Ngambo district. This cemetery was not seriously affected by the rains and was utilised also for burials from the Urambo area during the wet months.

A section of each native cemetery was allotted for Arab burials. The Belgian Memorial cemetery was relaid and planted with shrubs. The K.A.R. war graves cemetery was hedged.

An extension was made to the European cemetery, a new hedge planted and improvements to drainage carried out.

The War Graves Commission prepared the British war graves for the erection of headstones.

Thirty-one new burial grounds were laid out in the out-districts by the District Native Sanitary Inspectors.

GOVERNMENT SCHOOL, TABORA.

1.—MEDICAL INSPECTION.

Regular inspections of school and pupils were carried out twice weekly during the session.

The children are, on the whole, of good physique and nutrition, the standard of cleanliness is very high, and the general health of pupils, notwithstanding the occurrence of a considerable incidence of chickenpox, mumps and bilharzia, was well maintained during the year.

A detailed medical inspection of eight-two children was carried out, when the following conditions were noted :—

Enlargement of Spleen	...	...	...	...	...	...	15
Chronic Tonsillitis	...	...	...	...	...	...	14
Femoral Adenitis	...	...	...	...	...	...	8
Pharyngitis	...	...	...	...	...	...	7
Decayed Teeth	...	...	...	...	...	...	6
Defective Eyesight	...	...	...	...	...	...	5
Acute Tonsillitis	...	...	...	...	...	...	3
Elongated Uvula	...	...	...	...	...	...	2
Cardiac Disease	...	...	...	...	...	...	2
Ulcers	...	...	...	...	...	...	2
Anaemia (sec. to Bilharzia)	...	...	...	...	...	...	2
Pyorrhoea Alveolaris	...	...	...	...	...	...	2
Scabies	...	...	...	...	...	...	1
Phimosis	...	...	...	...	...	...	1
Urethritis	...	...	...	...	...	...	1
Inguinal Hernia	...	...	...	...	...	...	1
Elephantiasis	...	...	...	...	...	...	1
Umbilical Hernia	...	...	...	...	...	...	1
Deformed Feet	...	...	...	...	...	...	1
Bronchitis	...	...	...	...	...	...	1

Where possible, treatment was applied for the conditions.

2.—EPIDEMIC DISEASES.

1. *Mumps*.—23 cases occurred. Cases and contacts were isolated at the school and disinfection of clothing and bedding periodically carried out. All children were given an antiseptic gargle twice daily as a prophylactic measure and pupils were prohibited from visiting the town.

2. *Chickenpox*.—27 cases occurred. The cases and contacts were isolated at the school and other preventive measures taken.

3. *Vaccination*.—Vaccination of all pupils, teachers and families was performed, when smallpox existed in the township. 122 vaccinations in all were carried out.

3.—BILHARZIA.

88 pupils were examined with a view to ascertaining the incidence of urinary bilharzia. 37 cases were detected. The infection was contracted at Shinyanga, Kahama, Nzega and Tabora Districts. About half the number of children appeared to have been infected at Shinyanga. The cases were treated at Hospital

4.—SANITARY MEASURES.

1. *Latrines*.—The pit system was abolished and pan system instituted.
 2. *Incinerator*.—An incinerator was provided and a sweeper employed by Education Department to attend to this work and latrine sanitation.
 3. *Disinfection*.—A steam disinfector, after the Serbian barrel type, was constructed. This was necessary for the disinfection of clothing as a preventive against lice infestation. An issue of two sets of clothing was also brought into operation to assist in this connection.
- Disinfection of school premises was carried out weekly by the Health Department during the year.
4. *Water Supply*.—A pipe-born supply from Kitete was instituted.

MARKETS.

Formerly the meat market was sub-divided into compartments by wire meshing. This proved a serious obstacle to the efficient cleansing of the market in that floors could not be properly swilled down, the through ventilation was obstructed and flies greatly in evidence. All the outer meshing was removed, leaving only a small fly proof compartment for each stall. Floors were repaired and better drainage provided.

The daily cleansing of the market is carried out by this Department, the markets being closed down at 5 p.m. each evening for this purpose. A weekly spraying out with disinfectant is also done.

A special market is allotted for the sale of pombe, and with the exception of the shop at the K.A.R. cantonment, the sale of pombe is only allowed in the public market.

Three prosecutions for wearing dirty clothing in the meat market were carried out. The offenders were convicted and fined.

DRAINAGE.

Reference has already been made to the necessity for the laying of masonry drains through the Kitete and Chem Chem swamps. Masonry drains are also required for the main streets of the native area. In many places it is impossible to dig earth drains deep enough to carry away surface water as these drains collapse with the first rain that comes.

WATER SUPPLY.

Two additional wells were dug during the year to augment the existing supply at Kitete, an electric pump was installed and another tank erected on Kaseh Hill. At the end of the year the work of laying branch mains, to the Government School and Headmaster's Quarters, to several K.A.R. European Quarters and to the European Government Quarters in the vicinity of Post and Mission Streets, was commenced. All supply taps are being laid on to the kitchens or inside the quarters and not in the open compounds as formerly.

A new 2½ in. main in place of old 1½ in. one has been laid on from the tanks on Kaseh Hill to the European residences, etc. Experiments were carried out with a view to clearing the water by means of the lime sedimentation process. It is anticipated, however, that a large concrete tank will have to be provided before this can be done on a large scale.

HOUSING.

Reference has been made under Township Authority Work to the question of Native Housing. With regard to the housing of European officials this subject has been very acute throughout the year and great difficulty has been experienced in making adequate provision. As many as nine officials at one time were forced to live in tents or grass bandas or put up at the hotel, while several officers were unable to be posted to this station on account of quarters not being available.

Two new European houses were built during the year for the School and Political Departments. One of these however was seriously damaged by being undermined during the heavy rains of November and December.

WHITE ANTS.

It was noticed that a large number of buildings in the township suffered from depredation by white ants. An effort was made to exterminate the pest with a certain amount of success. Sixty queens were dug up in the vicinity of buildings during the year, and where the queen was inaccessible a solution of arsenite of soda was poured into the runs. As many as five queens were dug up from one building.

CONSERVANCY.

New latrines for Police Askaris and their families, and also for Prison Warders were built during the year.

A public latrine is required at the public laundry and will be built as soon as funds are available next financial year.

Hitherto all excreta have been incinerated. Owing the breeding of flies in the vicinity of incinerators, the trenching system was introduced in the case of excreta other than that from hospital and quarantine camp. During a part of the year, under strict supervision, this system was carried out with success.

HEALTH OFFICES.

The former office consisting of one small room at the Boma was found to be unsuitable as regards position and accommodation. Suitable premises at the building formerly known as the Grand Hotel in Livingstone Road which is in close proximity to the native area, were taken over on the 1st July at a monthly rental of Shs. 75/- on a yearly lease with the option of a second year.

No doubt in the near future the question of having a permanent building erected will have to be considered. In view of this a suitable site at the west end of Mission and School Streets, where the Child Welfare centre is at present in the course of erection, was selected.

CHILD WELFARE WORK.

October to December.

Number of children inspected	...	...	...	...	...	1527
„ „ „ treated for minor ailments	...	...	...	...	...	617
„ „ „ examined at schools	...	...	...	...	...	454
„ „ visits to new births in town	...	...	...	...	...	37
„ „ „ still birth case in town	...	...	...	...	...	3
„ „ „ Quarantine Station	...	...	...	...	...	18
„ „ children vaccinated	...	...	...	...	...	377
Number of children seen and admitted to hospital for treatment from K.A.R. Clinic	...	...	...	...	...	8

One sick child treated at village Kazima.

One visit to Government Gaol for inspection and vaccination of female and juvenile prisoners.

Instruction in Child Welfare Work given to Probationary District Native Sanitary Inspectors.

Arrangement for compulsory notification of births carried out. Akidas and Sultans of the sub-district and town instructed as to the objects of the clinic.

Erection of new clinic buildings commenced.

Temporary clinics started at K.A.R. lines and Health Office.

One native ayah engaged at a salary of Shs. 15/- p.m.

One District Native Sanitary Inspector retained for assisting in the work of the clinic.

Arrangements for supply of equipment for clinic carried out.

DEPARTMENTAL OXEN.

Three oxen died during the year. The Veterinary Officer attributed death as due to Trypanosomiasis.

Difficulty was experienced during the dry months of the year in obtaining an adequate supply for suitable food for the oxen. A new cattle boma was erected during the year.

DISTRICT NATIVE SANITARY INSPECTORS' WORK.

November (1 week only) and December.					
Details of work done in 10 out-districts:—					
Number of house inspections made	...	...	...	...	6912
Collections of mosquito larvæ found (Anopheles 116, Stegomyia 61)	...	...	...	...	255
Drains inspected	...	...	...	...	724
Cesspits and soakage pits inspected	...	...	...	...	793
Pools inspected	...	...	...	...	319
Wells inspected	...	...	...	...	1046
Areas inspected by Mosquito finders	...	...	...	...	10
Tanks and barrels inspected	...	...	...	...	12954
Collections of fly maggots found	...	...	...	...	109
„ „ Spirillum ticks found	...	...	...	...	1
„ „ Bullinus Molluscs found	...	...	...	...	3
New pit latrines ordered to be dug	...	...	...	...	2308
Dumps of rubbish removed	...	...	...	...	2246
Rats caught	...	...	...	...	141
Burial permits issued (verbal)	...	...	...	...	2308
New burial grounds laid out	...	...	...	...	31
Yards of drains cleared	...	...	...	...	200
„ „ new drains dug	...	...	...	...	366
DETAILS OF OTHER WORK DONE. (including out-districts).					
Total number of pit latrines ordered to be dug	...	...	...	...	2707
„ collections of fly maggots found	...	...	...	...	406
„ number of rats caught	...	...	...	...	441

EDUCATIONAL WORK.

Classes were commenced on the 1st of August for District Native Sanitary Inspectors. In addition to the subjects of Hygiene and Elementary Sanitation the Inspectors were given instruction in Child Welfare work.

The Inspectors attached to the Health Office and the Akidas of the Township were also given instruction from time to time, and the Sultans and Chiefs of the district received instruction at a Baraza in November at Itetemia.

SANITARY LABOUR.

An additional vote of about Shs. 2,000 is required to provide extra labour for general sanitary work such as grass cutting, digging and clearing of drains, etc., during the wet months of the year.

CONVICT LABOUR.

A small number of Convicts have been available from time to time during the year.

These have been employed in the demolition of dilapidated native huts.

METEOROLOGICAL NOTES.

Total rainfall for the year	...	...	...	...	...	1303.5 mm
Average daily rainfall for the year	...	...	...	...	...	3.5 mm
Heaviest rainfall on any one day during the year, (22nd November)	...	...	...	...	...	111.5 mm
Number of days rain fell	...	...	...	...	...	133
Number of months in which rain was recorded	...	...	...	...	...	10

Highest monthly rainfall recorded, (November)	...	...	...	589.3 mm
Average maximum temperature during the year	...	...	...	30.9 C
Average minimum temperature during the year	...	...	...	17.8 C
Highest maximum temperature recorded, (September)	...	...	...	39.0 C
Lowest maximum temperature recorded, (February)	...	...	...	21.9 C
Highest minimum temperature recorded, (January)	...	...	...	24.0 C
Lowest minimum temperature recorded, (July)	...	...	...	11.5 C

Heavy rain fell in November and December. 67 mm. fell in one hour and a quarter on the 22nd November and 76.5 mm. in one hour on the 29th November, 1925.

The weather since October has been very unsettled. Several very bad thunderstorms in close proximity to Tabora playing havoc with the electric light occurred in November and December. The heavy rains which occurred practically daily from the 11th to the 30th November were the cause of severe flooding in both town and out-district and damaged a large number of native huts, roads, drains, culverts, bridges, etc.

A detailed meteorological return is appended.

RETURNS OF STATISTICS OF THE POPULATION OF THE DISTRICT FOR THE YEAR 1925.

					European	African	Asiatic
*Number of inhabitants in 1924	...	...	...	...	Approximate total 518,100		
„ births in 1925	...	...	...	...	6	17†	not known
„ deaths in 1925	...	...	...	...	3	218	8
* „ inhabitants in 1925	...	...	...	...	Approximate total 518,100		

*Exact figures are not available.

†During the month of December only.

TABORA TOWNSHIP.

‡Approximate area of town: 2,200 acres.

‡Number of proclaimed open spaces: 3 (not yet proclaimed in *Gazette*).

‡Population of the Township: Approximately 20,000 of all communities.

‡The figures are the same for 1923, 1924 and 1925.

INSPECTIONS AND PROSECUTIONS.

	1923	1924	1925	
			Tabora	Out-Districts
Number of inspectors employed	2	3	4	12
„ „ houses inspected	15,511	24,153	38,700	6,912
„ „ „ where larvæ were found	197	197	86	Nil
Number of notices served to remove conditions causing breeding of larvæ	12	138	9	„
Number of persons fined for having mosquito larvæ on premises	1	Nil	4	„
Number of notices served to remove insanitary conditions on premises	45	87	77	„
Number of persons fined for not removing insanitary conditions after notice	Nil	1	9	„
Number of soda and aerated water factories inspected	4	4	4	„

METEOROLOGICAL RETURN FOR THE YEAR 1925.

MONTH			Temperature in °C.						Rainfall	
			Shade Maximum	Shade Minimum	Wet Bulb		Dry Bulb		Amount in M.M.	Heaviest rainfall on any one day
					9 a.m.	2 p.m.	9 a.m.	2 p.m.		
January	...	...	33.8	14.8	...	...	...	...	118.6	37.7
February	...	...	31.5	16.0	...	...	...	...	122.3	62.9
March	...	...	31.2	16.0	...	...	...	...	183.2	51.7
April	...	...	32.0	16.5	...	...	...	...	8.5	5.5
May	...	...	34.8	16.0	...	...	...	...	22.7	18.7
June	...	...	34.0	13.0	...	...	...	...	3.4	1.9
July	...	...	34.5	11.5	...	...	...	...	...	...
August	...	...	35.0	14.0	...	...	...	...	...	...
September	...	...	39.0	16.5	...	...	...	...	0.6	0.6
October	...	...	38.5	17.5	...	...	...	...	62.0	49.5
November	...	...	35.0	16.0	19.2	23.3	21.1	26.4	589.3	111.5
December	...	...	32.5	16.0	19.6	22.9	21.1	25.7	192.9	69.0

VACCINATIONS PERFORMED DURING THE YEAR 1925.

MONTH			Number Vaccinated	Source of Lymph	Successful	Modified	Negative	Not seen again
January	...	...	1,602	282,285	1,100	300	100	102
February	...	...	199	290,294	...	...	...	...
March	...	...	1,305	299,301	595	234	76	410
April	...	...	341	307,314	...	...	...	341
May	...	...	516	311,319	50	56	94	316
June	...	...	275	315,332	25	54	5	191
July	...	...	519	340,342	195	56	49	219
August	...	...	632	347,348	270	70	60	232
September	...	...	5,853	350,353	3,152	651	210	1,840
October	...	...	6,187	355,359	2,221	845	662	2,459
November	...	...	6,351	360,363	4,129	205	191	1,826
December	...	...	3,588	364,365 367,369	1,513	145	374	1,556
TOTAL			27,368	...	13,240	2,616	1,821	9,691

64.4% of those vaccinated were re-examined. Of this number 74.8% were successful.

14.8% were modified successful.

10.4% were failures.

EXTRACT FROM THE ANNUAL SANITATION REPORT FOR THE YEAR 1925,
FOR THE LINDI DISTRICT.

BY DR. R. MACKAY, SANITATION OFFICER, LINDI.

ADMINISTRATIVE.

The Sanitation Staff comprises a personnel of 39, made up as follows:—

Native Sanitary Inspector	...	...	...	...	...	1
Headman	...	...	...	...	...	1
Messenger	...	...	...	...	...	1
Mosquito brigade	...	...	...	...	...	4
Rat-catchers	...	...	...	...	...	2
Latrine attendants	...	...	...	...	...	9
Cart labourers	...	...	...	...	...	6
Casual labourers	...	...	...	...	...	15
Total						39

The Sanitation of the Township of Lindi had hitherto been managed in conjunction with the work at the hospital but since the latter part of the year, *i.e.* as from 19th September, there has been a Health Office and undivided attention has thus been given to Sanitation from that time.

PREVENTIVE MEASURES.

With regard to Beri-beri, Scurvy, Rickets and Pellagra no special preventive measures have as yet been taken apart from the supervision of food exposed for sale and introducing as many sanitary improvements as possible. Cases of Scurvy do occur in the gaol at Lindi from time to time and special attention is directed to the quality of the food of prisoners and to the general sanitation of the prison.

For the prevention of insect-borne diseases, endeavours have been made to eliminate the breeding places of flies and mosquitoes. Regarding mosquitoes every effort is made to make Wells, Tanks and all receptacles where water can collect, mosquito-proof; natural hollows are filled in as drainage is in most cases impossible. Steps have been taken to prosecute persons allowing mosquitoes to breed on their premises. The results of these measures have been that the possible breeding places of mosquitoes have been reduced.

Of Relapsing Fever, Trypanosomiasis, Yellow Fever, etc., there are no records for the year. Tsetse fly is found in Lindi District at Ndanda, Masasi and Tunduru, but no cases of Sleeping Sickness have been reported during the year. There is a fair percentage of *Stegomyia* mosquitoes but no cases of Yellow Fever. With regard to Filariasis no definite records are available but cases of Elephantiasis are met with.

General measures as mentioned have been undertaken to combat the mosquito concerned but these have not yet been sufficiently extensive to cause an appreciable decrease in the number of mosquitoes.

INFECTIOUS AND CONTAGIOUS DISEASES.

No attempt so far has been made to segregate Tubercular cases; there is, at present, no sanatorium in the District. They are, however, treated in an isolated portion of the hospital here.

An endeavour is being made to regulate the building of native huts with regard to position, size and general hygienic requirements of a good building.

As regards general Epidemic Diseases, Influenza has been seen in sporadic cases and minor epidemics throughout the year, the latter chiefly among prisoners undergoing long terms of imprisonment. The question of the sanitation of the gaol has been gone into and factors such as a bad water supply, lack of facilities for personal

cleanliness, the improper collection and disposal of excreta, over-crowding in cells, etc., all calculated to have deleterious effect on health have been considered. Steps have been taken to improve the sanitation of the prison with regard to water supply, conservancy, etc.

Endeavours have also been made to avoid over-crowding in the Township, the regulating of the building of houses and huts having been carried out as far as possible.

Preventive measures in the case of Plague have been directed mainly to supervision of buildings intended for grain or foodstuffs stores. Certain desiderata are to be conformed with before permission is granted to build these stores and the building is not to be used for human habitation. One building of this nature has been approved in Lindi within the year.

Furthermore, in the prevention of Plague, rats are being caught daily and the type of flea identified; so far one type only has been found namely *Xenopsylla*. No cases of Plague have been reported for the year.

The preventive measures against small-pox are confined to vaccination and the examination of newcomers into the Township where possible.

For the prevention of Cholera, Dysentery and Enteric fever improvements have been made in some of the wells, making them impervious to surface contamination; few native houses have satisfactory arrangements for the disposal of excreta; the practice of building pit-latrines has been regulated and measures to eliminate the breeding places of flies have been taken.

With regard to Helminthic Diseases, pools and other places potentially dangerous from the point of view of harbouring the infective forms of the *Ankylostome* and the *Schistosomata* are being filled in.

For the prevention of Taeniasis and Trichinosis meat is examined before being exposed for sale.

GENERAL MEASURES.

(a) The general measures taken for the prevention of diseases during the year were directed towards improving the wells which constitute the water-supply of the Township. The only source available yielding sufficient water for the requirements of the community was chosen and improvements on the following lines recommended, namely that the catchment area be fenced in, fitted with a pump, the water to be stored in a concrete tank above the highest level to be supplied, and that the pits and hollows in the neighbourhood of the wells be filled in. For the ultimate supply it was proposed to lead the water to the Township using water kiosks at convenient places.

Regarding the present wells, it was recommended that these be covered with concrete tops, fitted with a pump and provision made to render them safe against surface contamination. A half channel concrete guttering is provided to deal with water lost in pumping; it leads into a soakage-pit. This work is at present being carried out.

With regard to the disposal of excreta the pail system has been in use during the year in the case of Europeans, a few Asiatics and one Native. The major portion of the population use pit-latrines.

Examination of foodstuff exposed for sale has been carried out periodically and any breach of the Health Regulations in this connection is dealt with.

An endeavour was made to eliminate such nuisances as breeding places for flies, insanitary soakage-pits, cesspits and drains. The building of insanitary houses, etc., has been prohibited where possible.

The duties of the Port Health Officer have been carried out in respect of vessels arriving at the port.

(b) So far no measures have been taken to spread the knowledge of hygiene and sanitation. An attempt is always made to point out to the native that bad sanitary conditions mean ill-health but no definite form of propaganda has been introduced.

(c) With regard to future work it is recommended that the sanitation of the township be improved by introducing a proper conservancy system, supervising the sale of food, insisting on the strict observation of the rules and regulations governing sanitation, the notification of Births and Deaths if possible, ascertaining the incidence of such diseases as Ankylostomiasis, Bilharzia, Leprosy, Yaws, Tuberculosis and Venereal Diseases and Propaganda with a view to teaching the native the elements of hygiene and its importance in the prevention of disease.

The Administrative Department are co-operating with the Health Office to obtain figures regarding Births and Deaths.

* * * * *

IV. PORT HEALTH WORK AND ADMINISTRATION.

The quarantine station for the sea ports of the Tanganyika Territory is at Zanzibar, well organised and equipped. There are fully qualified Sanitation Officers at Dar es Salaam and Tanga, Medical Officers who function as such, at Bukoba, Lindi, Mwanza and Kigoma, Sub-Assistant Surgeons at Bagamoyo, Kilwa, Musoma, Mikindani and Pangani. Shipping is increasing and total numbers of Steamers and Dhows given pratique during the year at the different ports are as follows:—

						Steamers	Dhows
Dar es Salaam	...	...	...	...	...	323	766
Tanga	...	...	...	...	...	200	697
Lindi	...	...	...	...	...	44	147
Mikindani	...	...	...	...	...	17	163
Mwanza	...	...	...	...	...	51	798
Kilwa	...	...	...	...	...	22	279
Kigoma	...	...	...	...	...	106	24
Bagamoyo	...	...	...	...	...	40	581
Pangani	...	...	...	...	...	26	312
Musoma	...	...	...	...	...	100	—
Bukoba	...	...	...	...	...	52	10
						964	3,614

V. MATERNITY AND CHILD WELFARE.

In the 1924 report mention was made of the proposed opening of Clinics at Dar es Salaam and Tabora. The Health Visitor, Miss Allardes, commenced her activities at Dar es Salaam during November of that year, which consisted of weekly visits to the King's African Rifles and Police Lines where the children and women were inspected and treated for minor ailments. Such as required hospital attention were sent to the Native Hospital. The Government School children were seen daily, excluding Saturdays and Sundays, throughout the year. Treatment of the usual minor conditions at the school dispensary and vaccinations were performed periodically and dental attention arranged for. House visits connected with ante-natal, natal, and post-natal work in the town and in some instances at the outlying villages were paid, as necessity arose. The clinic itself was opened during the first week of June, 1925. It consists of an office, an out-patient room, a lying-in room, a small ward with two beds, and another room which could be used as a ward in emergency. The Tabora Clinic in charge of the Health Visitor, Miss Ryder, began in October, and good progress has been made. Arrangements for the opening of another clinic at Machame in the Moshi district were put in hand and a Sister, Mrs Cartlidge, engaged for the purpose.

From the figures given below it will be seen that considerable headway has been made already: a standard form of return is being prepared in order to secure uniformity.

VI. HOSPITALS AND DISPENSARIES.

Additions and alterations to the hospital accommodation in the Territory are detailed below.

		CASES TREATED.			
		1922	1923	1924	1925
In-patients	...	13,650	16,780	21,946	27,931
Out-patients	...	103,409	114,695	169,032	244,442
Total		117,059	131,475	190,978	272,373

This figure does not include cases of Yaws and Syphilis treated in the districts by mobile clinics or those attended to at the Maternity and Child Welfare centres.

An excellent Dental X Ray apparatus was installed at the Dental Surgery, Dar es Salaam, and is proving a great boon in conservative work.

NEW BUILDINGS ERECTED AND IMPROVEMENTS AND REPAIRS TO EXISTING MEDICAL BUILDINGS EFFECTED DURING 1925.

The following summary of work has been supplied through the courtesy of the Director of Public Works.

Division and Station		Description	Remarks
Dar es Salaam	...	Public Latrines Improvements to Drains	One completed New latrine and drain improvements constructed Sewa Hadji Hospital
Kilosa	...	Sanitary Fittings, European Hospital Native Hospital	Installed Asiatic Ward completed. Administrative Block and Boys Quarters in progress
Tanga	...	Quarters for Sub-Assistant Surgeon Quarters for Sub-Assistant Surgeon	Commenced Built as upper Storey to Dispensary : completed
Moshi	...	Stone-pitching of open drains Mortuary	Completed Completed
Arusha	...	Public Latrine and Incinerator Mortuary	Completed In progress
Mbulu	...	Quarters for Compounder	Completed
Tabora	...	Two Isolation Camps	Completed
Kigoma	...	Public Latrines Native Hospital	Completed One Ward and Operating Theatre completed. Latrine and kitchen in progress
Ujiji	...	Reconstruction of surface drains Public Latrines and Incinerators	2,580 ft. of drain constructed Two latrines and two incinerators completed
Dodoma	...	Special Repairs to Hospital Indian and Native Hospital	Completed In progress
Mwanza	...	Central Lunatic Asylum Public Latrines	Commenced 2 Completed
		Mortuary Operating Theatre and Stores Extension to Hospital	Completed In progress Two new wards completed

QUININE PROPHYLAXIS.

The arrangement for the sale to the public of quinine tabloids and powder at the Post Offices throughout the Territory were completed during December, and the drug was available for purchase from the first day of January, 1926. Attractive posters in English and Kiswahili, giving dosage, methods of use and prices were distributed. The "Dar es Salaam Times" was notified, and a copy of the Kiswahili poster was reproduced in the local African paper entitled "Mambo Leo", published by the Government Press. Tabloids to the extent of 270,000, powder in 10 grain packets and 1 ounce bottles, amounting to 100 lbs of quinine were placed on sale in the first instance.

REPORT ON THE HEALTH OF THE KING'S AFRICAN RIFLES,
TANGANYIKA TERRITORY.

6th Battalion.—Headquarters at Dar es Salaam with Garrisons at Arusha, Mahenge and Songea.

1. BRITISH OFFICERS.

	Dar es Salaam		Arusha		Mahenge		Songea	
Total British Officers and N.C.O's								
Resident	24		4		4		8	
Average Resident	14		3		2		3	
	All Diseases	Malaria and Black-water	All Diseases	Malaria and Black-water	All Diseases	Malaria and Black-water	All Diseases	Malaria and Black-water
Total on sick list	35	15	3	1	3	2	4	2
Total days on sick list	274	85	16	7	16	13	28	9
Average daily number on sick list...	0·75	0·23	0·04	0·019	0·04	0·035	0·07	0·02
Percentage of sick to average number resident	5·35	1·64	1·33	0·33	2·10	1·57	2·44	0·69
Average number of days on sick list for each patient	7·82	5·66	5·33	7	5·33	6·50	7	4·50
Average sick time to each resident...	19·57	6·07	5·33	2·33	8·42	6·84	9·79	3·14
Total number invalided								
Percentage of invalidings to total residents... ..	1	...	1	...	...	...	1	...
Percentage of invalided to average number resident	4·16	...	25·0	...	...	...	12·50	...
	7·14	...	33·33	...	...	...	34·96	...
Total deaths ... ..	...	...	...	...	...	...	...	...

2. OTHER RANKS.

	Dar es Salaam	Arusha	Mahenge	Songea
Total strength Native Ranks ...	543	175	115	217
Average ditto	441	165	...	217
Average daily number on sick list ...	15·20	3·16	1·22	12
Percentage of sick to average strength	3·44	1·91	...	5·53
Total number invalided	11	...	...	...
Percentage of invalidings to average strength	2·49	...	...	...
Total deaths	1	...	2	1
Percentage of deaths to average strength	0·23	...	...	0·46
Total admissions	800	126	43	90

2nd Battalion.—Headquarters at Tabora, with Garrisons at Iringa, Mwanza and Tukuyu.

1. BRITISH OFFICERS.

	Tabora		Iringa		Mwanza		Tukuyu	
Total British Officers and N.C.O's.								
Resident	29		8		6		5	
Average Resident	18		3		2		2	
	All Diseases	Malaria and Black-water	All Diseases	Malaria and Black-water	All Diseases	Malaria and Black-water	All Diseases	Malaria and Black-water
Total on sick list	5	3	3	2	4	...	...	2
Total days on sick list	18	13	45	13	19	...	...	18
Average daily number sick	0·04	0·03	0·12	0·03	0·05	...	...	0·05
Percentage of sick to average number resident	0·22	0·16	3·63	0·90	2·50	...	...	2·50
Average number of days on sick list for each patient	3·60	4·30	15	6·50	4·75	...	...	9
Average sick time to each resident...	1·00	0·60	13·63	3·93	9·50	...	...	9·00
Total number invalided ... ..	...	...	...	...	...	...	...	...
Percentage of invalidings to total residents ... ..	...	...	...	...	...	...	...	...
Percentage of invalided to average number resident ... ..	...	...	...	...	...	...	...	...
Total deaths ... ..	...	...	...	...	...	...	...	...

2. OTHER RANKS.

	Tabora	Iringa	Mwanza	Tukuyu
Total strength Native Ranks... ..	519	79	195	87
Average ditto	459	79	180	70
Average daily number on sick list	22·14	1·4	1·9	1·53
Percentage of sick to average strength	4·79	1·77	1·05	2·18
Total number invalided... ..	2	...	2	...
Percentage of invalidings to average strength	0·43	...	1·11	...
Total deaths	2	3	3	2
Percentage of deaths to average strength	0·43	3·78	1·66	2·85
Total admissions	405	...	...	...

Name of Prison	1 Number of Prisoners in Prison on 31.12.24	2 Number of Prisoners committed to Prison during 1925	3 Number of Prisoners in Prison on 31.12.25	4 Daily average number of Prisoners, 1925	5 Number admitted to Prison Sick Bay, 1925	6 Number admitted to Native Hospital, 1925	7 Daily average on Sick List	8 Number of deaths of Prisoners in 1925	9			10	
									Cause of Death in each case	Period of Detention in Prison prior to date of death	Prisoners released on Medical grounds	Cause of release in each case	
Arusha	84	393	75	86.3	...	69	6.5	2	1. Amoebic Dysentery 2. Tuberculosis of Lungs	Y. ... D. 4 7	Nil	...	...
Bagamoyo	19	223	38	28	14	2	1.7	Nil	...	...	...	...	...
Bukoba... ..	112	412	105	115	119	1	3.76	3	1. Dysentery 2. Pneumonia, General Debility	... 5 10 ... 4	Nil	...	...
Dar es Salaam...	197	304	163	201	70	143	5	7	3. Chronic Valvular Disease of Heart 1. Haemorrhage of Brain 2. Dysentery 3. Broncho-Pneumonia 4. do. 5. Epilepsy 6. Leprosy and intra- cardiac thrombosis 7. Lobar Pneumonia 1. Diarrhoea 2. Lobar Pneumonia	1 8 ... 2 3 10 3 5 10 ... 1 6 3 2 6 8 ... 2 22 9 20 ... 5 29 5 27 1 4 7	1	Phthisis	
Dodona	120	330	128	127	125	9	9.3	2	1. Ankylostomiasis 2. Broncho-Pneumonia	... 9 20 ... 5 29	Nil	...	...
Iringa	40	128	44	33.3	Nil	4	.08	Nil	...	...	Nil	...	...
Kahana	20	101	11	13.7	...	2	1.1	Nil	...	...	Nil	...	...
Kasanga	?	28		...	...	...	...	...	...	...	Nil	...	...
Kigoma... ..	105	313	84	90.66	32	21	1.07	2	1. Ankylostomiasis 2. Broncho-Pneumonia	... 9 20 ... 5 29	Nil	...	...
Kilosa	9	301	58	37.7	...	11	1.3	Nil	...	...	Nil	...	...
Kilwa	25	107	16	25	...	1	.2	1	1. Suicide, Cut throat	... ...	Nil	...	...
Kondoa-Irangi...	33	370	43	52	8	...	9	2	1. Ankylostomiasis 2. Trypanosomiasis	... 5 27 ... 4 7	Nil	...	...
Lindi	50	284	45	54	120	31	10	6	1. Heart failure from Inanition 2. Ulcerative Colitis 3. Heart failure from Malaria 4. Broncho-Pneumonia 5. Debility from tertiary Yaws 6. Influenza 1. Ankylostomiasis	... 9 ... 6 1 4 6 1 1 1 2 10 27 ... 4 8 ... 5 14	1	Chronic Diarrhoea Inanition	
Lushoto	30	99	29	22	Nil	3	6	1	...	...	Nil	...	...
Mahenge	13	93	10	15.27	Nil	Nil	Nil	Nil	...	...	Nil	...	...
Mikindani	19	75	18	15	2	1	.22	3	...	...	Nil	...	...
Morogoro	114	327	108	87	...	125	8	3	1. Mania 2. Diarrhoea and Debility 3. Pulmonary Tuberculosis	... 10 27 ... 4 8 ... 5 14	Nil	...	...

REPORT ON PRISONS BY STATIONS, 1925—continued.

Name of Prison	1 Number of Prisoners in Prison on 31.12.24	2 Number of Prisoners committed to Prison during 1925	3 Number of Prisoners in Prison on 31.12.25	4 Daily average number of Prisoners, 1925	5 Number admitted to Prison Sick Bay, 1925	6 Number admitted to Native Hospital, 1925	7 Daily average on Sick List	8 Number of deaths of Prisoners in 1925	9		10	
									Cause of Death in each case	Period of Detention in Prison prior to date of death	Prisoners released on Medical grounds	Cause of release in each case
Moshi	67	190	29	35	22	Nil	1.75	Nil	...	Y. ...	D. ...	...
Musoma	75	466	59	52	...	5	...	1	1. Diarrhoea	... 1	Nil	...
Mwanza	234	831	202	175	35	...	21	5	2. Acute delirious mania	... 18	Nil	...
Namanyere	15	78	11	13	1	...	1.8	Nil	...	3. Pneumonia	... 3	...
										4. Senile Decay	... 5	...
										5. Colitis	... 9	...
										...	... 8	...
										1. Malaria S.T.	... 5	9
Pangani	61	205	23	24	1	Nil	.05	Nil	...	...	...
Shinyanga	6	40	6	10.19	4	...	.08	Nil	...	...	...
Singida ... ..	...	70	15	15	3	...	2	1	...	...	...
Songea	24	112	13	23	3	...	...	...	1. Collapse under anaes- thetic while having his leg amputated	...	...	...
Tabora	107	504	209	147	36	...	10.9	7	...	1. Pneumonia	... 8	1
										2. do.	... 11	...
										3. do.	... 7	...
										4. Chronic Meningitis and Epilepsy	... 6	19
										5. Pneumonia	... 3	...
Tanga	132	519	113	125	128	...	7	4	...	6. Anaemia and Senile Debility	... 2	10
										7. Pneumonia	... 9	23
										1. Pulmonary Tuberculosis	... 1	...
										2. Pericarditis	... 7	...
										3. Enteritis ex Leprosy	... 9	...
Tukuyu... ..	127	216	107	120	158	...	11.2	11	...	4. Acute Mania	... 3	...
										1. Peritonitis	... 4	...
										2. Influenza	... 5	...
										3. Influenza	... 5	...
										4. Malaria	... 7	...
Ujiji ... ..	...	115	...	...	...	...	...	...	...	5. Influenza	... 5	...
										6. Influenza	... 1	...
										7. Influenza	... 1	...
										8. Influenza	... 1	14
										9. Influenza	... 3	...
Utete	19	...	19	18	9	...	1.14	Nil	...	...	...

REPORT ON PRISONS BY STATIONS, 1925—continued.

Name of Prison	11 System of confinement Association Cells (A.C.) or Single Cells (S.C.)	12 Cubic space available at night per prisoner taking average number	13 Floor space in square feet per prisoner taking average number of prisoners	14 Labour on which prisoners are employed and hours of work	15 Sanitary condition of Prison	16 Are cell floors cemented?	17 Prevailing diseases	18 Rules as to diet and hours of meals, what variety is provided, green food? meat?
Arusha	A.C.	Cubic feet 320	Sq. feet ...	Wood cutting, road mending, sanitary work in gaol, water carrying. Hours of work : 6.30 to 4 p.m., 6.30 to 12 p.m. Saturdays. Sunday no work, one hour for midday meal.	Satisfactory	Yes	Bronchial catarrh, influenza, diarrhoea	According to Prison Ordinance.
Bagamoyo	A.C.	535.7	45.5	Road making, wood cutting Sanitary work. 6.30 a.m. to 12 noon. 1 p.m. to 4 p.m.	Good	Yes	Malaria, ulcers, headaches, etc.	12 noon. 4.30 p.m. mealie meal, mtama, beans, mubogo, ghee, salt, sometimes green vegetables.
Bukoba... ..	2 Male cells, 2 Female cells, A.C., 6 S.C., 1 Hospital, 1 remand cell	380	37	6 a.m. to noon, 1 p.m. to 4 p.m. Wood cutting, stone quarrying, general prison work.	Very good	Yes	Malaria	Prisoners fed at 6 a.m. noon and 6 p.m. Diet includes green food and meat as per Prison Ordinance. Prisoners file past kitchen and receive food on enamel bowls.
Dar es Salaam	2 large A.C., 21 small A.C. No single cells	500	175	Tailoring, mat making, carpentry, masonry, rope making, assistants to smiths, stone breaking, pumping, general labour. Hours 6-12 noon. 1-4.30 p.m.	Good	Yes	Malaria, bronchial catarrh, lung troubles	12 noon to 1 p.m. 4.30 p.m. Good variety of food stuffs. <i>Scale A</i> : Long term prisoners and civil prisoners meat with bone 6 oz. maize 18 oz., beans 6 oz., potatoes 8 oz., ghee $\frac{1}{2}$ oz., salt $\frac{1}{4}$ oz., lemons 2 a week <i>Scale B</i> : Short term and remand prisoners maize 2 lbs., beans 5 ozs., ghee $\frac{1}{2}$ oz., salt $\frac{1}{4}$ oz., lemons 2 a week.
Dodoma	A.C.	360	36	Brick-making, building, lime burning, station and town improvements. Sanitation, cutting and collecting wood, water carrying. Hours : 6.30 a.m. to 12 noon, 1 to 4 p.m.	Satisfactory	Yes	Bronchitis, Malaria, S.T., minor injuries, diarrhoea, constipation, colic.	Govt. Notice No. 171 of 1924 closely adhered to. Two meals, 12 noon and 5.30 p.m. respectively.
Iringa	S.C.	784	60	Cleaning prison latrines, carrying wood and water, road repairing. 6 a.m. to 12 noon 1 p.m. to 4.30 p.m.	Good	Yes	Nil	Rationed as per scale laid down in Govt. Notice No. 171 of 1924. Hours of meals 6 a.m. 12 noon and 4 p.m.

REPORT ON PRISONS BY STATIONS, 1925—continued.

Name of Prison	11 System of confinement Association Cells (A.C.) of Single Cells (S.C.)	12 Cubic space available at night per prisoner taking average number	13 Floor space in square feet per prisoner taking average number of prisoners	14 Labour on which prisoners are employed and hours of work	15 Sanitary condition of Prison	16 Are cell floors cemented?	17 Prevailing diseases	18 Rules as to diet and hours of meals, what variety is provided, green food? meat?
Kahama ...	Associated. Women and juveniles are confined in separate cells	Cubic feet 820	Sq. feet 63	Supplying prison with wood and water, repairing the gaol, cleaning roads and sanitary labour generally.	Good	Yes	Malaria, bronchitis, diarrhoea	Food is provided according to the dietary scale laid down for all prisoners.
Kasanga ...	...	...	...	Wood and water duties, work on roads and bridges, labour on Government buildings, grass cutting and bush clean- ing. Not heavy work.	...	...	...	Hours of meals: 12 noon and 5 p.m. Mubogo and mealie meal 2 lbs., beans 5 ozs., salt 4 oz. daily. Lemons and sweet potatoes when obtainable, Re- vegetables unobtainable. Re- commend 3 lb. meat or fish twice a week covered by reduction of meal supplied.
Kigoma ...	A.C.	460	51	Wood cutting, road making, sanitary work, township improvements, grass cutting, tree trimming, improvement of station. Hours: 5.30 a.m. to noon and 1 to 4 p.m.	Good	Yes	Chicken-pox, ankylostomiasis, bronchitis, gonor- rhoea, syphilis	Three meals, 6 a.m., noon, 4.30 p.m. Diet changed thrice weekly. A variety of food is provided as follows:— mealie meal, manioc flour, beans, uncooked manioc, sweet potatoes, meat, salt, lemon juice, native spinach. Long term prisoners 3 lb. meat twice a week.
Kilosa ...	A.C.	202.9	...	Hours: 6 to 12 a.m. and 1 to 4.30 p.m. Work: building new Police huts, local sanitary work at gaol and Boma and general Government work.	Fair	Yes, but in bad repair	Ulcers and Malaria, but not bad	Hours: 8 a.m. 12 noon to 1 p.m. and 6 p.m. Meat is given to all long term prisoners. Germinated beans are given to all prisoners as it is not easy to obtain green food here.
Kilwa ...	A.C.	643	75	Prison gardening, station and town improvement, wood cutting, lime burning, and roads. Hours: 6 a.m. to 12 noon and 2 p.m. to 4.30 p.m.	Good	Yes	Malaria, bronchitis and minor injuries	Ordinance of 1921, 3 meals a day, regularly. Green food and fish provided, meat not available at Kilwa.
Kondoa-Irangi...	A.C.	710	47	...	Very Good	Yes	Bronchitis, malaria, diarrhoea	Food is of good quality and sufficient quantity.

REPORT ON PRISONS BY STATIONS, 1925—continued.

Name of Prison	11 System of confinement Association Cells (A.C.) of Single Cells (S.C.)	12 Cubic space available at night per prisoner taking average number	13 Floor space in square feet per prisoner taking average number of prisoners	14 Labour on which prisoners are employed and hours of work	15 Sanitary condition of Prison	16 Are cell floors cemented ?	17 Prevailing diseases	18 Rules as to diet and hours of meals, what variety is provided, green food ? meat ?
Lindi	A.C.	Cubic feet 500	Sq. feet 54	Wood cutting, road making, sanitation, building, masonry. 6.30 a.m. to 12 noon 1 p.m. to 4 p.m.	Satisfactory	Yes	Yaws, malaria, debility, bronchitis, conjunctivitis	6 a.m. porridge; midday, beans, meal or mtama, ghee, salt, limes squeezed in water or mangoes if available. Evening 5 p.m.: Similar to midday varied as to grain, fish if available twice a week, green vegetables, pumpkins, sweet potatoes when possible. 12 noon and 5.30 p.m. Vegetables three times a week. Meat when serving sentences of over six months duration.
Lushoto	A.C.	765	63	Government roads, Prison garden, building. Hours : 6.30 to 12 noon 1 to 3.30 p.m.	Good	Yes	Bronchitis	As laid down in the diet scale of the prison. Meat or fish are always available and bananas, pumpkins, and European vegetables are also supplied when necessary.
Mahenge	A.C.	462	104	Cultivating prison farms, cutting and carrying firewood, drawing water, carrying lime as required, cleaning up Police lines daily.	Satisfactory, but privy should be improved when cement is avail- able	...	Minor injuries, stomach and bowel troubles and colds	$\frac{1}{2}$ lb. of mtama, $\frac{1}{2}$ lb. of beans, $\frac{1}{4}$ oz. salt twice a day : 12 noon 5 p.m. according to the Prison Dietary Scale.
Mikindani	A.C., S.C.	206	49	Fuel cutting, cleaning compounds, road making and repairing.	Good	Yes	Injuries, const- ipation, bronchitis, headache, abscess, ulcers, diarrhoea	According to Official Gazette No. 15 of 1921. Meal times 12 to 1 p.m., 4.30 to 5.30 p.m. Green food, sweet pota- toes, mohogo, beans, lemons, limes, meat supplied to long term prisoners.
Morogoro	14 A.C. 5 S.C.	562	49	Wood cutting, brick making, lime burning, cultivation of prison shamba. 7 to 12 noon. 1 to 4.30 p.m. Saturdays until 12 noon. Sundays nil.	Very satisfactory	Yes	Constipation, general injuries, malaria.	
Moshi	A.C.	200	54	Hours : 6.30 to 12 noon. 1 p.m. to 4 p.m. Prison indus- tries making bricks, building huts, carpentry, lime burning, fuel cutting, sanitation.	Very good	Yes	Malaria, small-pox, local injuries, hel- minthic diseases	Maize, beans, mealie meal sweet potatoes, meat, ghee, lemons, salt. Hours of meals :—Noon and 4.30 p.m.
Musoma	A.C.	300	26	6.30 a.m. to 12 noon. 1 p.m. to 4 p.m.	Good	Yes	Nil	Maweke, beans, sweet potatoes, lemons, meat three times a week.

REPORT ON PRISONS BY STATIONS, 1925—continued.

Name of Prison	11 System of confinement Association Cells (A.C.) of Single Cells (S.C.)	12 Cubic space available at night per prisoner taking average number	13 Floor space in square feet per prisoner taking average number of prisoners	14 Labour on which prisoners are employed and hours of work	15 Sanitary condition of Prison	16 Are cell floors cemented ?	17 Prevailing diseases	18 Rules as to diet and hours of meals, what variety is provided, green food ? meat ?
Mwanza	A.C.	Cubic feet ...	Sq. feet 24	6.30 a.m. to 12 noon. 1 p.m. to 4 p.m.	Good	Yes	Injuries, diarrhoea, malaria	Meal hours 6 a.m., noon, and 5.30 p.m. $\frac{1}{2}$ lb. meat, $\frac{1}{2}$ lb. beans, 1 lb. meat in addition varied with native foods and potatoes.
Namanyere ...	A.C.	483	48	Brick making, gardening, building, water carrying, wood cutting. 9½ hours a day. 5½ Saturdays. Nil Sundays.	Good	Yes	Local injuries, bronchitis, malaria	In accordance with Dietary Table authorised under Govt. Notice No. 118 of 1921.
Pangani	A.C.	400	47	Rigorous : Lime burning, wood cutting and station improvement. Simple : Mat weaving, rope making, jail cleaning and other light work. (9 hours a day).	Good	Yes	Minor ulcers and wounds caused while at work	Early morning, midday, and evening meals. As much variety as possible consistent with local supply and Dietary scales.
Shinyanga... ..	A.C.	630	26	Cleaning township area, sup- plying water and firewood. Hours : 7 a.m. to 12 noon, 2 to 4 p.m.	Good	Yes	Bronchitis and local injuries	Meal hours :—12 noon and 5 p.m. Mtama porridge and $\frac{1}{2}$ oz. ghee, meat $\frac{1}{4}$ Kg. once a week.
Singida... ..	A.C.	500	30	Water carrying, wood carrying. General work in Prison and Boma.	Good	Yes	Nil	Two meals a day. Flour and vegetables, etc.
Songea... ..	A.C.	400	46	Unskilled road making, building, station improve- ment, general labour. 6.30 to 12 noon, 1 to 4.30 p.m.	Good, but the building is in bad repair and the roof leaks badly.	No. Floors are of wood	Rheumatism and bronchitis	Scale as laid down in Govt. Notice 171 of 1924. Meals at 6 a.m., 12 noon, and 6 p.m. Dried fish issued once a week in lieu of fresh meat. Muhogo, potatoes, beans, lemons, germ- inated beans.
Tabora	A.C.	260	125	Carpentry, tailoring, rope making. (Outside) Brick making, building, wood chopping, water carrying. Hours : 6.30 a.m. to 12 noon, 1 p.m. to 4 p.m.	Good	Yes.	Pneumonia more prevalent than usual	6 a.m., 12 noon, 6 p.m. Maize, muhogo and beans. Long term prisoners have 6 oz. meat, $\frac{1}{2}$ oz. ghee, and $\frac{1}{4}$ oz. salt daily, also 8 oz. green vegetables four days per week Short term prisoners receive 8 oz. green vegetables four days per week also $\frac{1}{2}$ oz. ghee and $\frac{1}{4}$ oz. salt daily.

REPORT ON PRISONS BY STATIONS, 1925—continued.

Name of Prison	11 System of confinement Association Cells (A.C.) or Single Cells (S.C.)	12 Cubic space available at night per prisoner taking average number	13 Floor space, in square feet per prisoner taking average number of prisoners	14 Labour on which prisoners are employed and hours of work	15 Sanitary condition of Prison	16 Are cell floors cemented ?	17 Prevailing diseases	18 Rules as to diet and hours of meals, what variety is provided, green food ? meat?
Tanga	16 A.C., 6 small cells.	Cubic feet 343	Sq. feet 44	Hours: 6.30 to 12 noon and 1 p.m. to 4 p.m. Soap making, tailoring, lime burning, wood- cutting, sanitary work, build- ing and town improvement.	Unsatisfactory, see last remarks of report.	Yes.	Cellulitis, myalgia, malaria, diarrhoea	Three meals a day 6 a.m., 12 noon, 5.30 p.m. <i>Long Term</i> :— Natives get lemons 4 times a week and meat 6 oz. Europeans vegetables and lemons, 12 oz. meat 4 times a week. All others are fed as per Prison Ordinance scale 191 section 61.
Tukuyu	5 A.C., 4 S.C.	1350	58	Hours 6.30-12 noon, 1 p.m. to 4 p.m. Town improvement, road making, forestry, gar- dening.	Very satisfactory	No.	Influenza, P.U.O.	6 a.m., 12 noon, 5.30 p.m. Rice, maize, beans, ghee, salt, meat thrice weekly for long term prisoners.
Ujiji ... ..	...	...	...	...	...	...	Nil	Nil.
Utete	A.C.	435	54	On improvement works, also to assist in repairs to Police and Prisons buildings. Hours: 7 a.m. to 12 noon, 1 p.m. to 4.30 p.m.	Good.	No.	Malaria, bronchitis, constipation, dysentery and headache	Prisoners are fed on both green food and meat according to the Prison Dietary Scale. Meal hours: 6 to 6.30 a.m. 12 noon and 5 p.m.

REPORT ON PRISONS BY STATIONS, 1925—continued.

Name of Prison	19. Vaccinations				20. Infective Diseases				21. Insects and other Pests in Prison							
	Number during 1925			Number excused Vaccination on account of previous smallpox or successful recent vaccination	Number not protected against smallpox	Number of Cases of			Lice	Bugs	Fleas	Ornithodoros Moubata	Rats	Mice		
	Vaccinated	Successful	Modified			Failures	Chicken-pox	Dysentery							Influenza	Other
Arusha...	78	60	...	18	...	13	3	15	1	...	...	...	...	...
Bagamoyo ...	34	21	8	5	...	...	...	...	...	...	...	...	...	...
Bukoba...	Nil	...	...	...	...	...	...	...	...	...	...	...	...	...
Dar es Salaam...	Nil	...	...	...	...	2	...	...	3	...	...	...	Yes	...
Dodoma ...	126	38	12	76	...	23	1	...	...	...	...	...	...	...
Iringa ...	128	56	48	24	...	...	...	...	...	...	...	...	...	...
Kahama ...	Nil	...	...	...	...	...	...	...	...	...	...	...	...	...
Kasanga ...	*	...	...	...	...	...	...	...	...	...	...	...	...	...
Kigoma ...	99	81	14	4	...	12	...	...	...	Yes	Yes	...	...	...
Kilosa ...	80	52	15	13	...	...	...	...	...	Yes	...	...	...	...
Kilwa ...	Nil	...	...	...	...	...	...	...	...	...	...	...	...	...
Kondoa-Irangi	110	52	13	45	132	...	...	...	...	...	...	...	...	...
Lindi ...	†	...	...	...	...	...	...	...	...	...	...	...	...	...
Lushoto ...	†	...	...	...	...	...	...	...	...	...	...	...	...	...
Mahenge ...	Nil	...	...	...	...	...	...	...	...	...	...	...	...	...
Mikindani ..	1	...	...	1	...	...	...	...	1	Yes	...	...	...	...
Morogoro ...	36	25	7	4	...	...	11	...	...	...	Very few.	...	...	...
Moshi ...	45	...	...	...	...	5	...	...	...	Yes	...	...	...	...
Musoma ...	Nil	...	...	...	...	...	1	...	...	...	...	...	...	...
Mwanza ...	15	...	...	...	...	...	...	...	1	...	...	...	...	...
Namanyere ...	21	1	...	20	13	...	...	...	...	...	...	...	Yes	...
Pangani ...	Nil	...	...	...	...	...	...	...	...	...	...	...	...	...
Shinyanga ...	8	...	...	...	...	...	...	...	...	...	...	...	...	...
Singida...	12	...	12	...	58	...	...	...	...	...	...	...	Yes	...
Songea...	Nil	...	...	...	...	...	...	...	...	...	...	...	...	...
Tabora...	205	77	75	53	335	...	3	...	36	...	...	...	Yes	...
Tanga ...	35	11	...	24	...	12	...	...	...	...	...	...	Yes	...
Tukuyu...	98	29	59	10	...	...	...	7	...	...	Yes	...	Yes	...
Ujiji...	Nil	...	...	...	...	...	...	...	...	...	...	...	...	...
Utete ...	Nil	...	...	...	...	...	...	...	...	...	...	...	Yes	...

*New prisoners are being Vaccinated.

†All prisoners are Vaccinated if not recently done and if not previously had smallpox.

‡All prisoners.

REPORT ON PRISONS BY STATIONS, 1925—continued.

Name of Prison	22				23			
	Suggestions by the Medical Officer in charge as to improvements required and date when made.				Action taken by Prison Authorities as a result of 22:—			
	(a) Accommodation and Ventilation	(b) Diet	(c) Sanitation	(d) Other Matters	(a)	(b)	(c)	(d)
Arusha... ..	Increased accommodation has been suggested to deal with any sudden influx of prisoners.	Nil	Suggested that sufficient number of feeding bowls be provided for each prisoner to have his own bowl.	...	Carried out.	...	Matter referred to Headquarters and 150 bowls are en route.	...
Bagamoyo ... ..	...	...	...	...	...	...	...	...
Bukoba... ..	...	...	...	...	...	...	...	...
Dar es Salaam...	Roofing of jail hospital and cells. Stricter separation of lepers.	Stricter compliance with Diet Scales.	Two open drains to be covered.	Requisitioned more blankets and mattresses for sick prisoners Ordered stricter compliance with rules for prisoners in chains and solitary confinement.	Carried out.	Carried out.	Carried out.	Carried out.
Dodoma	Fourteen cells have been provided with increased ventilation by the construction of one or more windows per cell.	...	New latrines have been provided for both male and female prisoners and the old latrines have been removed, new wash houses have been constructed for both male and female prisoners. Improvements have been effected in the kitchen and a large concrete table erected for distribution of food. A large banda has been built to protect prisoners against the heat in exercise yard. The use of white-wash in the interior of prison yard has been superseded by at first a cement wash and subsequently a yellow ochre wash.	...	...	...	...	...
Iringa ... ..	...	...	...	...	...	...	...	...
Kahama	Nothing to suggest. Everything in order.	...	...	...	...	...	...	...

REPORT ON PRISONS BY STATIONS, 1925—continued.

22		23						
Name of Prison	Suggestions by the Medical Officer in charge as to improvements required and date when made.				Action taken by Prison Authorities as a result of 22 :—			
	(a)	(b) Diet	(c) Sanitation	(d) Other Matters	(a)	(b)	(c)	(d)
	Accommodation and Ventilation							
Kasanga	Ample.	...	Provision is made for female prisoners. Bathing and washing done on Sunday, soap being provided.	...	...	...	...	...
Kigoma ... ..	...	...	A weekly flushing of latrines with weak disinfectant, cleansing of buckets with disinfectants, cleansing of cooking utensils immediately meal is served.	...	...	...	Action in each case taken.	...
Kilosa	No suggestion as a new building is to be erected in the near future.	...	...	...	...	...	...	...
Kilwa	Nil	...	...	...	...	...	...	...
Kondoa Irangi ...	...	...	...	Coconut mattress for sleeping mats.	...	...	...	...
Lindi ... ..	...	Fresh fish in lieu of dried, green vegetables.	Water supply. Renovation of latrine floors.		...	Apparently unobtainable.	In hands of P.W.D. Done.	Indented for but not yet received.
Lushoto	Drains to be cemented.	...	Provision of lids for drinking water drums.	...	Carried out satisfactorily.	...	Done	...
Mahenge	Nil	...	...	...	...	...	...	...
Mikindani	Nil	...	...	Extra blankets where necessary.	...	...	...	...
Morogoro ... ..	...	Germination of peas and beans.	Further augmented supply of buckets and disinfectant.	Use of cane in place of 'kiboko'.	...	Carried out.	Done	Done
Moshi... ..	...	...	...	...	...	...	...	...
Musoma	Rat proof store. Two more wards Prison hospital. Solitary confinement.	...	Supply of disinfectant in large quantity. Drums and buckets.	...	...	...	...	...

REPORT ON PRISONS BY STATIONS, 1925—continued.

Name of Prison	22 Suggestions by the Medical Officer in charge as to improvements required and date when made.				23 Action taken by Prison Authorities as a result of 22:—
	(a) Accommodation and Ventilation	(b) Diet	(c) Sanitation	(d) Other Matters	
Mwanza ... ..	...	...	...	...	...
Namanyere ... ..	...	...	...	...	...
Pangani ... ..	...	...	Metal lined bins for food suggested, but not yet fitted.	...	Bath suggested and fitted in December.
Shinyanga ... ..	...	...	Disinfectant sprinkled twice a week on floors.	...	...
Singida ... ..	...	...	...	...	...
Songea ... ..	...	...	...	...	...
Tabora	As a new prison building has been authorised there are no suggestions concerning present building.	...	...	...	...
Tanga	A. Female prisoners should be transferred from this prison B. Juvenile prisoners should be given separate accommodation. C. European cell should have a ceiling of wood and a large window put in.	...	...	...	Three female lunatics were transferred to Luti-ndi.
Tukuyu	Re-roofing of the old portion of prison.	...	...	...	Suggestion submitted to proper authority.
Ujiiji ... ..	...	...	Deep pit type latrines be abolished and pan system substituted.	...	Above suggestions being carried out this year.
Utete ... ..	...	...	...	...	...

REPORT ON PRISONS BY STATIONS, 1925—continued.

Name of Prison	24	25	26	27	28	29
	What sanitary arrangements are there in the cells for use at night?	Is drinking water provided for use at night?	Is there a weight register and is it kept up to date?	What number of blankets is provided for each prisoner?	Is the clothing sufficient?	Further remarks and suggestions
Arusha	Sanitary buckets in each cell for urination. Ordinary day latrine within easy reach.	Yes	Yes	One. Two in cold weather when available.	Yes	Sanitary buckets to be emptied frequently. There is ample water supply for sanitary purposes. There is a cement bath in prison. All prisoners bath daily. The cells are clean and free from nuisance.
Bagamoyo	Latrine buckets for each cell.	Yes	Yes, only for long term prisoners	One blanket and one mat	Yes	One bath room is necessary for prison
Bukoba	Night pans provided.	Yes	Yes	One blanket, one mat.	Yes	The ventilation might be improved.
Dar es Salaam ...	Latrine buckets in cells and wards.	Yes	Yes	An extra blanket may be provided in cold weather	Yes	...
Dodoma	One urine drum. One latrine pan.	Yes	Yes	One blanket, one coconut mat. One hide, one suit cotton uniform (short term) two suits (long term).	Yes	...
Iringa	Buckets placed in each at night and removed in the morning.	Yes	Yes	One, and in certain cases two.	Yes	The condition of the prison is good, and the health of the prisoners during the year has been very satisfactory. There have been no deaths. The diseases from which most of the prisoners suffered were as follows: Bronchial catarrh, bronchitis, conjunctivitis, diarrhoea, and general injuries.
Kahama	Ample for purpose of relieving nature.	Yes	No weight register is kept.	One	Yes	Nil
Kasanga ... ..	...	...	...	...	...	...
Kigoma	Sufficient buckets in each cell.	Yes	Yes	One	Yes	...
Kilosa	Yes. Latrine pans each cell.	Yes	Yes, for long term prisoners.	One	Yes	Nil
Kilwa	There are all sanitary arrangements in the cells for use at night.	Yes	Yes	One blanket and one sleeping mat.	Yes	Nil
Kondoa-Irangi ...	Latrine pans in cells at night.	Yes	Yes	...	...	Nil

REPORT ON PRISONS BY STATIONS, 1925—continued.

Name of Prison	24 What sanitary arrangements are there in the cells for use at night ?	25 Is drinking water provided for use at night?	26 Is there a weight register and is it kept up to date?	27 What number of blankets is provided for each prisoner ?	28 Is the clothing sufficient?	29 Further remarks and suggestions
Lindi	Buckets	Yes	Yes	One. In cold weather two. Dried coconut-palm mat. A proper mattress should be provided.		Throughout the year prison sick were treated at the Prison Dispensary adjacent to the prison. Only the very sick prisoners were admitted to Native Hospital for treatment. Those unfit for duty were detained in Gaol Hospital which is capable of admitting 10 prisoners. Throughout the year six prisoners died. These were without exception long term prisoners. The mental effect of a long sentence on a prisoner and the lack of proper food in Lindi go far to bring about this result. It has been suggested therefore that prisoners sentenced to 12 months and over be transferred to another prison where they may obtain green vegetables and meat rations. This probably would prevent so frequent deaths occurring among this class of prisoners.
Lushoto	Each cell provided with pan, removed and disinfected every morning.	No	Yes	Two	Yes	Nil
Mahenge	Every cell is provided with a covered pail.	Yes	Yes	Yes	Yes	None
Mikindani	Buckets kept.	Yes	No	One blanket.	Yes. Two suits provided.	...
Morogoro	Sanitary buckets in each cell.	Yes	Yes	One, if necessary two.	Yes	Exceedingly well-run prison. Failing new building a new roof is required.
Moshi	Urine buckets with tin covers in each cell.	Yes	Yes	One	Yes	Medical Officer suggested six beds and sick ward to be arranged for the accommodation of convicts not requiring hospital treatment. This was done. When the number of prisoners was 65 and 20 awaiting trial, Medical Officer suggested better ventilation and increased accommodation. Plans for extension of gaol were sent to Commissioner of Prisons. Ventilation was increased by removing galvanised iron ceiling and substituting barbed wire and increasing ventilation below the doors. Bugs were also to a great extent diminished by removal of the ceiling. A new cement bath and new incinerator were constructed.
Musoma	Two drums in each cell.	Yes	No register.	One	Yes	...

REPORT ON PRISONS BY STATIONS, 1925—continued.

Name of Prison	24	25	26	27	28	29
	What sanitary arrangements are there in the cells for use at night?	Is drinking water provided for use at night?	Is there a weight register and is it kept up to date?	What number of blankets is provided for each prisoner?	Is the clothing sufficient?	Further remarks and suggestions
Mwanza	Sanitary buckets supplied	Yes	Yes	One	Yes	Store to be made rat-proof. Another site for European latrine.
Namanyere ...	Sanitary buckets in each cell.	Yes	Yes	One	Yes	Nil
Pangani	Night soil tubs for urine, etc.	Yes	Yes	One and a mat for sleeping.	...	Nil
Shinyanga ... ..	...	Yes	Not kept.	One	...	Nil
Singida	Outside latrines only.	Yes	No	Two	Yes	...
Songea	Latrine buckets and lids for each cell	Yes	Yes	Two	Yes	Merely that the building is cold, and inadequate, and that a new prison is obviously essential.
Tabora	One latrine pan each cell.	Yes	Yes	One blanket and one sleeping mat.	Yes, except in the cold weather.	Sick prisoners in Hospital be supplied with 3 blankets each. Each prisoner should be supplied with two blankets during the rains and in the months of July and August.
Tanga	One urine bucket and one sanitary pan.	Yes	Yes	One blanket and mat. Aged patients provided with two blankets,	Yes	To instal a new dry system of latrines and excreta incinerated. New system of drainage. There is a shortage of yard space. Separate accommodation for women prisoners. Action is being taken and defects will be rectified shortly.
Tukuyu	Lidded sanitary buckets	Yes	Yes	Two	Yes	...
Ujiji ... ..	...	...	...	...	...	...
Utete	Latrine pails are placed at 6 p.m.	Yes	Yes	One blanket and one mat.	Yes	Prison itself, though clean, is in a dilapidated condition; a new building is suggested

REPORT ON THE HEALTH OF THE POLICE.

STATION	Total strength	Average strength	Average daily number on sick list	Percentage of sick to average strength	Number invalided	Percentage of invalidings to average strength	Number of deaths	Percentage of deaths to average strength	Total admissions to Hospital
Arusha... ..	78	76	0·87	1·14	...	...	...	...	37
Bagamoyo	41	38	1·3	3·42	...	...	...	...	66
Bukoba... ..	75	73	2·1	2·89	...	...	...	...	178
Dar es Salaam ...	132	130	7	5·33	3	5·38	...	...	358
Dodoma	105	98	4·13	4·21	1	1·02	...	...	30
Iringa	69	65	·6	·92	...	...	...	...	30
Kahama	22	22	·02	·90	...	...	...	...	7
Kasanga	18	18	...	...	...	...	...	...	...
Kasulo	13	13	...	...	...	...	...	...	...
Kibata	12	12	0·23	1·91	...	...	...	...	...
Kigoma... ..	106	103	1·24	1·21	2	1·94	1	0·97	31
Kilosa	32	32	1·2	3·60	...	...	...	...	2
Kilwa	70	69	·8	1·16	1	1·3	...	...	27
Kondoa-Irangi... ..	36	35	0·02	0·5	...	...	...	...	8
Lindi	172	170	8	4·70	6	3·50	2	1·10	...
Lushoto	50	46	5	1·86	...	...	...	...	...
Mafia	27	24	...	...	...	...	...	...	1
Mahenge	50	41	·31	·74	...	...	...	...	4
Manyoni	17	17	·02	·12	...	...	...	...	2
Mbulu	20	20	0·18	·90	...	...	...	...	10
Mikindani	27	24	1·2	5·00	...	...	...	...	75
Mkalama	19	17	...	...	...	...	...	...	...
Morogoro	93	78	2·7	3·46	...	...	...	...	33
Morogoro Depot ...	566	190	19	10·00	14	7·30	1	0·5	168
Moshi	54	53	1·25	1·33	...	...	...	...	11
Musoma	37	30	3·5	10·16	...	...	...	...	...
Mwanza	122	116	1·1	·94	4	3·44	...	...	...
Namanyere	38	31	2·69	6·40	1	3·22	...	...	...
Pangani	33	20	2·0	10·0	1	5·0	...	...	12
Shinyanga... ..	25	22	·3	1·35	...	...	...	...	11
Singida... ..	16	16	7	43·75	...	...	...	...	7
Songea	50	45	2	4·33	...	...	...	...	21
Tabora	136	75	4·26	5·67	1	1·33	...	...	127
Tanga	70	70	1·46	2·07	...	...	1	1·41	67
Tukuyu	103	93	3·50	3·76	...	...	...	...	...
Tunduru	20	19	·6	3·15	...	...	...	...	30
Ujiji	57	55	·94	1·70	...	...	1	1·81	...
Utete	55	55	1·32	2·40	...	...	...	...	33

APPENDIX I.

ANNUAL REPORT OF THE SUPERINTENDENT,
LUTINDI LUNATIC ASYLUM.

STAFF.

European: 2. Matron and Superintendent.

Native: Male and female attendants, cooks, messengers, etc.

Males Females Total.

NUMBER OF PATIENTS.

In residence on 1st January, 1925	...	...	52	35	87
Admitted during the year	...	...	17	4	21
Discharged „ „ „	...	...	12	4	16
Died „ „ „	...	...	14	3	17
Remaining on 31st December, 1925	...	...	43	32	75
Daily average in residence	...	...	44	34	78

	Males	Females	Total
Average stay of those discharged 1 yr. 9 mths.	5 yrs. 9 mths.	2 yrs. 9 mths.	
„ „ „ „ who died 2 „ 5 „	2 „ 11 „	2 „ 6 „	„
„ „ „ „ remaining 5 „ 11 „	8 „ 3 „	6 „ 11 „	„

ADMISSIONS.

The total during the year was twenty-one.

The majority were in poor physical condition when admitted.

Their mental condition was classified as follows:—

- 2 Suspected G. P. I.
- 7 Suffered from Mania.
- 7 Depressive Insanity with Delusions.
- 4 Feebleness of mind.
- 1 Imbecility with Epilepsy.

One female was pregnant when admitted.

Two males were re-admissions to this Asylum, both suffered from Mania.

DISCHARGES.

The 16 patients discharged during the year were classified as follows: —

- 2 Males were discharged improved.
- 4 Females were discharged improved.
- 1 Male was discharged on transfer to Tanga Hospital.

The remaining 9 were discharged as recovered. As in former years, males suffering from Mania provided the bulk of the recoveries.

DEATHS.

14 Males and 3 Females died during the year.

The principal causes, so far as could be ascertained in each case, was as follows:—

- 3 Exhaustion following prolonged excitement and restlessness.
- 2 Senile decay.
- 2 Paralysis.
- 2 Pyrexia Uncertain Origin.
- 3 Intestinal Complications.
- 1 Heart failure.
- 1 Apoplexy.
- 1 Epilepsy.
- 1 Phthisis.
- 1 Pneumonia.

MAINTENANCE.

Estimated average monthly expenditure on each patient in residence throughout the year :—

	Shs
In food and tobacco	5.49
In wages of employees	4.00
In clothing and blankets ... ..	.77
In sundry replacements ... ..	.11
In lighting and cleaning materials ... ..	.13
Cost per head	<u>10.50</u>

FARM PRODUCE.

Crops grown in Asylum grounds during the year :—

	Shs.
Beans 1977 lbs. valued at	250.04
Sweet potatoes 8577 lbs. valued at	353.08
Muhogo 1038 lbs. valued at	73.26
Vegetables, 414 lbs. valued at	18.38
Tobacco 172 lbs. valued at	92.30
Fruit	48.00
Total value	<u>835.06</u>

The above were taken on Ration Ledger charge.

The Asylum coffee crop realized Shs. 538/20, which was paid in to Treasury, Tanga.

The sum of Shs. 43/-, realized from sales of ox hides and medicines to sundry natives, was also paid in to Treasury during the year.

Based upon average number resident (78) the value of Farm Produce is Shs. 17/60, per head, during the year.

EXPENDITURE.

<i>From 1st January to 31st December, 1925.</i>	Shs.
January—to maintenance of 83 lunatics	1025.85
February „ „ „ 82 „ „ „ „ „ „ „ „	697.94
March „ „ „ 81 „ „ „ „ „ „ „ „	589.72
April „ „ „ 84 „ „ „ „ „ „ „ „	486.09
May „ „ „ 82 „ „ „ „ „ „ „ „	606.45
June „ „ „ 77 „ „ „ „ „ „ „ „	789.35
July „ „ „ 76 „ „ „ „ „ „ „ „	2038.47
August „ „ „ 77 „ „ „ „ „ „ „ „	942.18
September „ „ „ 76 „ „ „ „ „ „ „ „	857.37
October „ „ „ 75 „ „ „ „ „ „ „ „	512.11
November „ „ „ 74 „ „ „ „ „ „ „ „	506.24
December „ „ „ 75 „ „ „ „ „ „ „ „	849.35
	<u>Shs. 9901.09</u>

The cost of transport of Stores to Asylum was Shs. 46.10.

HEALTH.

There has been no epidemic and no serious casualty has occurred throughout the year.

Three patients sustained severe cuts and bruises as a result of falls during epileptic seizures. Several others received minor injuries at the hands of fellow patients.

No case of ill-treatment on the part of attendants was observed, and no complaint was received from any patient.

Artificial restraint (handcuffs) was resorted to in the controlling of 5 violent and destructive patients for a total period of 64 hours.

Nine patients were placed in seclusion for periods which totalled 164 hours.

There were two male escapes from working parties; both were returned next day by local Akidas.

GENERAL.

An average of 45 male and female patients found daily employment in and around the Asylum.

Ten articles of furniture were made for Tanga Hospital.

Repairs were carried out and one room in the female wing was re-inforced with concrete.

The Administrative Officer, and Medical Officer, Lushoto, each paid a visit of inspection during the year.

The Matron dispensed treatment to 1009 persons from surrounding villages, a list of their ailments is attached.

Ample supplies of medical stores have been received from Headquarters during the year.

OUT-PATIENTS TREATED AT THE ASYLUM DISPENSARY.

Treated for								Persons treated
Aural discharge	...	...	...	...	...	...	...	20
Bronchitis	...	...	...	...	...	...	...	107
Burns	...	...	...	...	...	...	...	1
Constipation	...	...	...	...	...	...	...	82
Conjunctivitis	...	...	...	...	...	...	...	13
Debility	...	...	...	...	...	...	...	3
Diarrhoea	...	...	...	...	...	...	...	9
Eczema	...	...	...	...	...	...	...	1
Herpes	...	...	...	...	...	...	...	3
Indigestion	...	...	...	...	...	...	...	3
Inflammation (local)	...	...	...	...	...	...	...	8
Injury	...	...	...	...	...	...	...	31
Neuralgia	...	...	...	...	...	...	...	1
Pleurisy	...	...	...	...	...	...	...	3
Pyrexia of Uncertain Origin	...	...	...	...	...	...	...	75
Rheumatism	...	...	...	...	...	...	...	5
Scabies	...	...	...	...	...	...	...	16
Tooth extraction	...	...	...	...	...	...	...	32
Ulcers	...	...	...	...	...	...	...	108
Worms	...	...	...	...	...	...	...	488
Total								1009

Six cases of severe injury to limbs were treated in the Asylum till recovery.

VIII. RAINFALL IN MILLIMETRES.

(EXTRACTED FROM THE ANNUAL REPORTS OF THE AGRICULTURAL DEPARTMENT.)

Station.	1924.	1925.
Arusha	1211.20	1155.50
Mbulu	—	864.10
Bagamoyo	846.46	1260.50
Bukoba	2029.40	1893.90
Biharamulo	989.42	1068.90
Dar es Salaam	735.21	1196.20
Dodoma	220.80	595.00
Manyoni	332.56	698.87
Singida	495.00	725.40
Iringa	—	663.10
Malangali	608.60	654.60
Kilwa	470.10	739.60
Kondoa-Irangi	281.10	477.60
Mkalama	520.03	678.44
Lindi	427.82	936.80
Kibata	—	1335.70
Liwale	502.70	1229.80
Tunduru	571.90	1227.60
Masasi Mission	546.30	1221.60
Mikindani	—	328.10
Mafia	1592.90	1362.01
Mahenge	1649.50	1369.95
Morogoro	857.40	778.10
Kilosa	781.40	1045.80
Ngerengere	798.69	972.17
Moshi	579.20	660.50
Mwanza	876.50	1079.30
Musoma	—	850.80
Pangani	79.82	1016.59
Utete	632.27	779.35
Tukuyu	2650.90	2521.60
Songea	667.70	1328.90
Lipumba	883.10	1227.80
Milo	1222.68	1622.70
Tabora	546.00	1303.40
Kahama	739.30	1040.35
Kola Ndota Mission (Shinyanga)	550.20	792.30
Tanga	1157.90	1149.00
Amani	1560.20	2291.00
Kigoma	786.36	1165.38
Ujiji	979.01	979.30
Namanyere	815.97	—
Kasanga	570.38	—
Kasulo	1106.10	1323.70
Lushoto	1099.60	1143.40

IX. SCIENTIFIC.

A paper entitled "Experiments on the Administration of Quinine in Watery Solution and in Olive Oil" by Dr. J. O. Shircore, Dr. J. F. Corson and Dr. P. A. Clearkin, was published in the Transactions of the Royal Society of Tropical Medicine and Hygiene Vol. XIX—No. 8—February 1926. These experiments were conducted during 1925, and the conclusion arrived at was that "quinine sulphate in olive oil, administered intravenously to the sheep, is weight for weight, 2.6 times less toxic than a watery solution of quinine bihydrochloride, and may be given up to a maximum of 0.65 grain per lb. of body weight without producing a fatal result."

A communication entitled "Yaws and Syphilis in Tropical Africa" by Dr. J. O. Shircore, which appeared in the *Lancet* of the 3rd July, 1926, advocated the short intensive course of mass treatment with Bismuth Sodium Tartrate on an extensive scale for those diseases, as being more applicable to the relief of the sufferers and the rapid reduction of widespread infectivity than an attempt at permanent cure of smaller numbers by prolonged and expensive methods. Experience of the use of a new compound obtained by the reaction between Bismuth Sodium Tartrate and Soamin was brought to notice and commented upon.

MERCUROCHROME AND CALCIUM CHLORIDE.

During the year a communication was received from the Secretary of State to the effect that Dr. Andrew Balfour had suggested the trial of Mercurochrome in the treatment of plague. Comprehensive accounts of the results obtained in septicaemia and pneumonia gonorrhæal sequelæ and arthritis, with Mercurochrome, and, relating to the latter affections, with Calcium Chloride, published by the United Fruit Company, Boston, Massachusetts, during 1924 in the Proceedings of the International Conference on Health Problems in Tropical America held in Jamaica, were noted.

These communications formed the basis of a circular issued to the Medical staff giving details of administration. Besides the conditions mentioned above trial was requested in spirillum fever, small-pox, typhoid, bacillary dysentery and leprosy. Sufficient data were not received during 1925 to fulfil the purposes of a report; Mercurochrome has, however, been used for bilharzia, spirillum fever, and ulcers. The results in bilharzia now indicate that it is unlikely to prove of value, but most favourable reports have been transmitted, from independent sources, regarding spirillum fever and ulcers. Apparently Mercurochrome, although it does not always prevent relapses reduces their frequency, and cuts down the pyrexial period within twelve hours—this was first reported by Dr. Connell, Medical Officer, Songea, later by Dr. Parry from Moshi and has also been experience of subsequent observers. Ulcers of septic, frambœsial, and syphilitic origin are profoundly influenced for the better, more particularly the first named.

In Pneumonia Mercurochrome is said to shorten the course of the disease and to hasten recovery by a rapid lysis rather than by crisis.

In Gleet, Orchitis and Epididymitis beneficial results have been obtained by the use of Calcium Chloride. See also relevant notes by Dr. Connell and Dr. Blackwood on pages 103 and 109.

NOTES ON MALARIA AND BLACKWATER FEVER BY DR. T. H. SUFFERN, M.B., B.A.O., CH.B., SENIOR MEDICAL OFFICER, TABORA.

There were 1178 cases of Malaria with one death. The fatal case was one of Cerebral Malaria. There were four other cases of Cerebral Malaria who recovered.

2. There were ten cases of Blackwater Fever during the year, five Europeans, two Goans and three Indians, all males. The seasonal incidence was as follows:—

One case in January, three in March, two in April, three in May and one in September.

There were three deaths, one European and two Indians, giving a death rate of 30%. The European died of uraemia twelve days after the urine cleared.

One Indian died of suppression only $3\frac{1}{2}$ days after the onset. The attack was an extremely acute and malignant one and was undoubtedly aggravated by the patient making a short railway journey to Hospital after the illness began.

The second Indian died after an illness lasting $4\frac{1}{2}$ days. The attack was an extremely acute and malignant one. This man had had two attacks of Cerebral Malaria within a period of eight months.

One of the European cases, a Greek, developed an attack of Tick *Spirillum* Fever 13 days after the urine cleared. Whether this was the first attack or a relapse I was unable to determine. He got no relapse after a dose of .75 grammes Neokharsivan.

NOTES ON MALIGNANT DISEASES, BY DR. C. L. LEVERS, L.R.C.S., L.R.C.P.,
D.T.M., L.R.F.P.S., SENIOR MEDICAL OFFICER, TANGA.

I believe I saw five cases of Malignant Disease among the African Patients during the year; three of these were confirmed pathologically in Dar es Salaam. A brief account of each is as follows:—

(a) A Sarcoma of the left eye in a child of three. The patient was admitted to Hospital on the 1/10/25 with a caseous degenerating condition of the left eyeball. The eye was removed. On 15/10/25, the child was again admitted with a large mass filling the orbit: this was removed and a portion sent to the Laboratory, Dar es Salaam, where it was diagnosed as Sarcoma. The condition was inoperable and the child died on 28/12/25.

(b) A tumour was removed from a patient on 26/11/24. On the 15/12/25, he was again admitted to Hospital with an enormous tumour implicating the right Scapula and chest. The tumour was removed, but the patient died two hours after operation. A portion of this tumour sent to Dar es Salaam was diagnosed as a mixed spindle celled and round celled Sarcoma.

(c) A patient was admitted on the 6/11/25 with a large fungating epithelioma of the leg which had supervened on a chronic Ulcer. The leg was amputated on the following day and a portion of the tumour was sent to the Laboratory, Dar es Salaam, where the diagnosis of epithelioma was confirmed. The patient was sent to Dar es Salaam en route to his home in Nyasaland.

(d) A woman attended as an Out-patient suffering from Paget's Disease, but when an operation was suggested, she could not be persuaded to attend again.

(e) An In-patient had a mass in the abdomen very suggestive of Carcinoma: but left Hospital without operation so the diagnosis could not be confirmed.

REPORT ON A CASE OF FRACTURE OF THE SKULL BY DR. C. R. H. TICHBORNE, L.A.H.,
MEDICAL OFFICER, KONDOK-IRANGI.

In his village of Sandawe a man had a quarrel with his wife; on the pretence of cutting wood, he brought her out into the bush, and there attempted brutally to murder her.

The woman was brought into hospital with six wounds on her head, five of which were complete compound fractures of the vault of the skull; at first appearance the head seemed almost severed from her body, the injuries were three days old, the head wrapped in a filthy blood-stained native cloth, was covered with mud, the severed muscles and torn scalp sloughing, and a general septic state prevailed. Under these conditions the prognosis seemed hopeless, nevertheless the patient did live, and attended the court three months subsequently.

Besides a scalp wound three inches long and reaching to the bone, there were five complete compound fractures of the vault of the skull; these wounds were inflicted by a panga. The fractures were:—one left temporal, one frontal, one right parietal, one left parietal, and one fracture of occipital bone five inches long, and one and a half inch gap, all these fractures communicated with the surface of the brain, and in all cases the cerebral meninges were exposed. It would seem almost miraculous, that considering the anatomical relations of the Middle Meningeal artery, especially its anterior branch, also the Temporals externally, that these vessels could have escaped rupture, a fatal haemorrhage ensuing.

During the year six cases of cancer were seen and five confirmed by microscopical sections.

Case No. I. A Chagga boy aged 12 years was admitted for a lump the size of a small tomato, $1\frac{1}{2}$ inches by 1 inch, situated over the right temporo-maxillary joint, which was interfering with mastication. He had first noticed this lump two years previously. The tumour was removed and was found to be a soft vascular growth attached to the periosteum in close proximity and surrounding the Temporo-maxillary joint. No infected glands could be found. The growth was sent to the Laboratory, Dar es Salaam, and was diagnosed as a fibro-sarcoma.

Case No. II.—A Chagga man aged about 35 years was admitted for ascites. The abdomen was enormously distended and 65 pints of dark brown fluid were removed. The liver could then be felt to be enlarged with definite lumps on its anterior surface. The patient was much emaciated and the only symptoms he gave were that he noticed his abdomen getting large six months before admission. P.M.:—The liver was greatly enlarged with hard yellow growths more or less scattered throughout the whole of its area. The size of these growths varied from $\frac{1}{4}$ to 2 ins. in diameter. Secondary deposits were found in the lesser omentum and in no other place. Diagnosed by the Laboratory, Dar es Salaam, as a primary Carcinoma.

Case No. III.—A Nyasaland timekeeper in the Public Works Department was admitted for chronic ulcer of the leg which he had had for two years. He had suffered much pain recently and was unable to walk. Enlarged hard glands the size of a hen's egg could be felt in the groin. The ulcer was scraped and cleaned and a piece sent to the Laboratory which was diagnosed as Epithelioma. He refused further operative treatment and was repatriated.

Case No. IV.—A Chagga woman about 40 years old came to Hospital for a fungating mass in the right axilla which she had had for a year. A small hard fixed lump was found in the right breast which she was quite unaware of. Sections of the breast tumour and axillary mass were sent to the Laboratory and diagnosed Spheroidal Celled Carcinoma. Her condition was inoperable.

Case No. V.—An old Chagga woman with a chronic ulcer of many years standing was admitted and asked that her leg might be removed because it caused her so much pain and did not allow her to sleep and her health was rapidly declining. Amputation was performed above the knee. A specimen of this growth was sent to the Laboratory and diagnosed as Epithelioma. She regained her health and put on weight and was discharged quite satisfied. The glands in her groin diminished due in some measure no doubt to the loss of this septic mass.

Case No. VI.—An old Chagga man was admitted in a comatose condition with an enlarged liver. No history was obtained owing to his condition. P.M.—showed a large liver with scattered yellowish growths varying in size from a pea to one inch diameter. No secondary deposits in this case were found. About two pints of dark green stained fluid was present in the abdomen. The Laboratory report has not yet been received but there is no doubt that it is a primary Carcinoma of the liver.

I do not believe that malignant disease is so uncommon as it is stated to be among the uncivilised African and because of this belief many cases no doubt have been overlooked in the past. Why is primary carcinoma of the liver so common in the African when it is such a rare disease in Europe?

I am sure that a great number of the chronic ulcers sooner or later become Epitheliomatous and the fungating ulcers of old standing in the majority of cases are malignant.

NOTES ON INTERESTING CASES; VOLVULUS OF SMALL INTESTINE, BY DR. J. H. PARRY,
B.A., M.R.C.S., L.R.C.P., MEDICAL OFFICER, MOSHI.

A man of about 35 years employed in the Public Works Department was seized with severe abdominal pain at 7.30 a.m. and was brought to the Hospital at 11 a.m. Previous History:—Patient had always suffered from constipation, often going four or five days without a motion and about a year ago he had been seized with abdominal pain and had been admitted to Hospital but relief followed the administration of Castor Oil. Since then he had enjoyed good health.

On admission patient was a well-nourished and a well-developed man of middle age. The abdomen was much distended and pain was chiefly situated round the navel. The pulse and temperature were normal and patient had not vomited, an enema was given and a small result followed. A diagnosis of acute Intestinal obstruction was made and an operation decided upon as early as possible, chiefly because of the rapid distension.

Operation was performed at 2.30 p.m. An incision about seven inches long was made through the right rectus muscle close to the middle line at the level of the umbilicus. The fibres of the muscle were separated and drawn outwards. The peritoneum was exposed and picked up with forceps and opened with scissors and then enlarged. Some dark stained fluid escaped and enormously distended coils of small intestine obliterated any possibility of exploration of the abdomen. A trochar and canula was inserted into the distended gut and the flatus expelled and a purse string suture was used to close the opening. The contents could then be exposed and it was found that a very large coil of small intestine having a long mesentery had become twisted a complete turn upon itself and at the constriction it appeared as if a band were the cause of the obstruction. The constricted intestine which would have measured about three feet in length was a purplish colour but in good condition otherwise.

This portion was well washed with hot saline solution and returned to the abdomen.

The abdomen was then sutured and deep interrupted sutures were used.

The patient made a rapid recovery and was discharged cured in 19 days. The bowels opened of their own accord the following day of the operation and he was found walking about on the fourth day but warned not to do it again.

The interesting points about this case were, habitual constipation, a mild attack a year before presumably a volvulus which relieved itself, sudden pain with rapid distension, no vomiting, normal pulse and temperature.

The deceptive nature of the last three symptoms made the diagnosis difficult but I believe that in cases of this kind they are by no means unusual and that the main symptom to aid the diagnosis is increasing distension.

HAEMORRHAGIC PURPURA DUE TO TICK BITES, BY DR. J. H. PARRY, B.A., M.R.C.S.,
L.R.C.P., MEDICAL OFFICER, MOSHI.

A Forest Officer while on safari in the Ngare Nairobi district was very severely bitten by ticks on the legs, arms and body generally. Three days afterwards he noticed a severe purpuric rash had developed on every part of the body including the palms of the hands, bleeding from gums and mucous membrane of the mouth and throat, sub-conjunctival haemorrhage, etc. He immediately came to the Hospital and when I saw him he had a temperature of 100 and pulse 80 but was not feeling very ill. There was a severe purpuric rash over the body generally varying in size from a pin's head to a large ecchymosis. There were dark purple patches on the fauces and buccal mucous membranes, bleeding from the gums which were not spongy or tender, several subconjunctival haemorrhages. No haematuria. Stools were black evidently due to bowel haemorrhages. Blood was negative for Malaria and Spirillum fever.

I admitted him to Hospital where he remained for six days until much improved and then discharged him to bed in his quarters. He was able to return to work after three weeks. The only treatment he had was Calcium Lactate and Iron and Arsenic.

I attribute this haemorrhagic purpura to the toxic effect of tick bites.

I have looked up what literature I have on the subject but can find no reference to tick bites causing a severe purpura of this kind. The ticks in this instance were the ordinary grass ticks as far as I could gather from the patient.

REPORT ON TWO CASES OF RELAPSING FEVER SUCCESSFULLY TREATED BY
MERCUROCHROME, BY DR. J. H. PARRY, B.A., M.R.C.S., L.R.C.P.,
MEDICAL OFFICER, MOSHI.

Case No. I.—A police askari who had returned from Mwanza on local leave contracted Spirillum fever there and was admitted to Hospital on his second relapse. He was given Mercurochrome 15 c.c. of 1% solution intravenously; three hours afterwards he passed blood per rectum mixed with diarrhoea which lasted for a day and a half. There was no evidence of piles to account for this blood. No other symptoms were noticed. The effect on the temperature and the spirilla was excellent, the former dropped to normal the next morning and did not recur again and he has had no further attacks since. The spirilla were very numerous in the thick blood slide taken on the day of the attack and were not searched for afterwards.

Case No. II.—This man came from Meru district and was brought to Hospital at the end of his first attack, the blood taken during the evening was not examined till the following morning and during the night his temperature came down to normal. He was kept in Hospital pending the next relapse which occurred seven days afterwards. This was also confirmed by a blood slide. He was given 15 c.c. of 1% solution of Mercurochrome intravenously and had no untoward symptoms whatever. The temperature fell to normal the next morning and rose to 99 the following day. He remained in Hospital for a further period of twelve days but had no further relapse.

Relapsing fever cases are very useful for the purpose of watching the effect of Mercurochrome because they have a definite organism and have definite relapses which can be easily observed.

The pursuit of further experiments with this obviously useful drug has been handicapped by lack of additional cases.

A CASE OF AMOEBIC DYSENTERY SIMULATING ENTERIC FEVER, BY DR. J. H. PARRY,
B.A., M.R.C.S., L.R.C.P., MEDICAL OFFICER, MOSHI.

A European non-official aged 44 years was admitted to Hospital on the 12/6/25 and gave the following history. He began by feeling ill four days before admission and had been trying to get his temperature down with quinine and aspirin without success and when questioned he admitted feeling unfit for work ten days before that owing to pains in the legs and a tired feeling generally.

On admission his temperature was 101 and pulse 88, physical signs were all negative including the blood examination for Malaria on three consecutive days. He did not appear very ill and did not complain of any pain or headache. Bowels were constipated but the tongue was moist and clean. During the second week a widal was sent to the Laboratory Dar es Salaam which was negative. Two stool examinations were negative and as no septic foci could be discovered a diagnosis of enteric was made. The temperature chart of which I attach a copy* somewhat condensed simulates a chart of enteric very closely, the pulse was also slow in proportion to the temperature. The bowels were obstinate and were only relieved by enemata.

*Not reproduced.

During the fifth week blood was sent to Dar es Salaam and was negative for T.A.B. and Melitensis. Two other widals were taken in the 8th and 9th weeks, one sent to Dar es Salaam was negative and the other to Nairobi which was returned with the following comments. "This serum agglutinates *B. typhosus* and *B. paratyphosus* A.B. 1 in 25 (S+) by Dreyers method. By Garrows method T.A.B. are negative. The positive by the former method is probably due to a T.A.B. inoculation at some time and is diagnostic of Enteric in the present illness. *B. melitensis*, *B. paramelitensis*, *B. abortus* (Bang), *B. abortus* (Stockman) and *B. proteus* × 19 were not agglutinated by this serum." It was only in the tenth week that the slightest suspicion of hepatitis was given when the liver became tender and a little enlarged and there was some pain in the right shoulder. Frequent severe rigors occurred and in one the temperature went to 106 and the patient was extremely ill. With the symptoms pointing to a possible amoebic hepatitis or abscess Emetine gr. 1 was given daily and from then onwards steady progress was made and convalescence quickly established.

NOTES ON TWO CASES OF MALIGNANT DISEASES AND THE TREATMENT OF
GONORRHEAL SEQUELÆ WITH INTRAVENOUS INJECTIONS OF CALCIUM CHLORIDE,
BY DR. A. McA. BLACKWOOD, M.B., CH.B., MEDICAL OFFICER, LINDI.

One case of cancer of the penis occurred during the year. The entire organ was removed and the patient left the Hospital remarkably fit.

One other case of tumour of the upper jaw apparently involving the hard and soft palates was observed. This presented all the appearances of a cancerous growth, and it is proposed to have this case sent to the Dar es Salaam Hospital for appropriate treatment.

Not a few cases of Gonorrhoeal infections, mainly complications, have been treated with Calcium chloride injections with very good results. Rheumatic pains have quickly cleared up and swelling of the testicle mainly Epididymitis have quickly subsided under its influence.

PRIMARY CANCER OF THE LIVER IN AN AFRICAN NATIVE, BY DR. G. A. WILLIAMS,
L.R.C.P., M.R.C.S., MEDICAL OFFICER, MOROGORO.

On August 7th, 1925, the dead body of an African Native was brought to Hospital.

He was unknown and had been found dead early that morning in a house where he had been employed for a very short period as a night-watchman.

He was recognised as belonging to the Gogo tribe, he was about 5ft. 2in. in height, and probably about 45 years old.

He appeared well nourished, there were no external signs of any injury, but there was marked distension of the abdomen.

History.—Very little could be learnt of the deceased. He appeared to have been a comparative stranger to Morogoro, and had only quite lately been engaged as a night-watchman in a vacant house and premises.

His name even was unknown, but he was recognised as an Mgogo by his build and tribal marks.

He had been found dead in the morning, and he was not known to have complained of any kind of illness.

POST-MORTEM FINDINGS.

Chest.—Small amount of free fluid, which was straw-coloured. Surfaces of both lungs were found to be studded with numerous, hard, cream coloured nodules, of varying sizes up to an inch or so in length, and half an inch thick. Similar nodules were also found in the lung substance, and in the parietal pleura, and diaphragm.

Abdomen.—On opening the abdomen a large quantity of blood stained fluid gushed forth under pressure, and after clearing away the fluid, about 3 or 4 ounces of blood clot was found attached to a mass of malignant growth, in the upper epigastrium, and enclosing the termination of the portal vein.

It was a blood-vessel in this growth which had ruptured and brought about his death.

The liver was much enlarged, and was also studded with nodules, similar to those already found in the chest, except that they were of a dirty grey colour, and they varied in size, from that of a pea to that of a pigeon egg.

There were also nodules scattered throughout the liver itself, and, on section, these nodules stood out from the rest of the cut surface.

The liver and lungs were sent complete to the Director of the Government Laboratory, Dar es Salaam, and he reported the case as one of Primary Carcinoma of the liver, and kindly sent me sections of the growths, both from the liver and lungs.

In accordance with Medical Circular, No. 172 of 8/8/25, I give the following details.

Tribe.—Gogo from near Dodoma. *Age.*—About 45. *Sex.*—Male.

Occupation.—Probably, as is the custom of the members of the Gogo tribe, he had formerly been engaged in looking after cattle.

Change of Occupation.—He had recently come to Morogoro to work as a night watchman, having possibly got beyond more active work.

District where disease was contracted.—Probably in the district in which he had been born and brought up: *i.e.*, Dodoma district.

Ordinary Diet.—Meat, milk, mealies, cassava root, melons, sweet potatoes. Water is a serious question in the Dodoma district. It is scarce and brackish, and in certain seasons natives have all their time taken up in watering their cattle.

Change in Diet.—There would be no great change after coming to this district, except that he could get bananas and more green vegetables perhaps, but less meat and no milk.

Chronic Irritation of Site of Disease.—There is no evidence of this, but most probably not.

REPORT ON A CASE OF SPRUE, TREATED WITH PARATHYROID EXTRACT AND CALCIUM

LACTATE, BY DR. C. F. SHELTON, M.D., L.R.C.P., M.R.C.S., ACTING

SENIOR MEDICAL OFFICER, EUROPEAN HOSPITAL, DAR ES SALAAM.

E. J., Male, British, Born in London, went to the East for the first time in the early part of 1920 as a Purser in one of the B.I.S.N. Co's ships running between Calcutta, Madras, Bombay and Durban. With the exception of a few months at home in the spring of 1922, patient remained in this part of the world until the end of 1923, when he returned to England. While at home in 1922 he stated that he suffered for nearly two months from chronic diarrhoea, for which he consulted several medical men without obtaining any relief. On questioning him about this illness nothing suggestive of Sprue could be elicited. During his service with the B.I.S.N. Co. practically the whole of his time was spent on shipboard, *i.e.* with the exception of an occasional day or so he was not resident ashore at any time. In November, 1924, patient came to East Africa, living there, first at Mombasa and then at Dar es Salaam, until his admission to Hospital at the latter place.

On 7/4/25 he was admitted to the European Hospital, Dar es Salaam, with the following history. For the last 4 weeks he had been suffering from chronic diarrhoea—had been passing 5 to 7 stools daily—and had been feeling generally unwell, weak, and able to do his work (that of a clerk in a Shipping Firm) only with an effort.

The diarrhoea commenced about 3.0 or 4.0 a.m.—was unaccompanied by any abdominal pain or discomfort, or by any soreness of the mouth or tongue. It had always ceased by midday.

On examination:—

Patient looked ill, 'sallow, and thin: weight 7 st. 12 lbs. (Stated normal was about 9.0 st.) Stools loose, pale, copious, sour smelling and frothy—typical of Sprue. No involvement of tongue or buccal mucous membrane.

On 8/4/25, after a preliminary purge of Castor Oil, treatment was commenced with Parathyroid Extract and Calcium Lactate—a 12 day course consisting of gr. 1/10 Parathyroid (Parke Davis & Co's. tablets) every night and gr. 10 Calcium Lactate t.d.s. being given—the patient at the same time being kept in bed and put on a milk diet.

Improvement in the character and number of the stools was rapid and steadily maintained. From April 13th onwards he never passed more than two stools in the 24 hours—and these commenced to be formed on the 15th (*i.e.* seven days after commencement of treatment). On April 19th small amounts of solid food began to be introduced into the dietary.

On the 23rd April patient developed a severe attack of sub-tertian malaria, which, although it yielded readily to routine quinine treatment, considerably retarded his convalescence. Fortunately, however, this attack was not accompanied by any return of the diarrhoea. On May 1st soft formed stools were being passed which contained a little faecal colouring matter.

On May 25th he was discharged from Hospital and sent for a short sea voyage.

When seen on his return from this the general condition was much improved—he looked and felt well and had put on weight. When last heard from on 10/8/25 he was back at work in Mombasa and enjoying satisfactory health having had no return of the diarrhoea—although the stools were still paler than normal.

I think the results obtained in this case are sufficiently good to be worthy of recording.

I much regret I was unable to obtain any estimation of the Calcium content of the blood.

Weight records:—

7/4/25 (on admission to hospital)	...	...	...	7 st. 12 lbs.
25/5/25 (discharge from hospital)	...	...	...	8 st. 2½ lbs.
6/6/25 (return from sea)	...	...	...	8 st. 6½ lbs.

I wish to thank Dr. J. O. Shircore, Director of Medical and Sanitary Services, Tanganyika Territory, for kindly giving me permission to report the case.

I attach a note by Dr. H. H. Scott who first introduced the Parathyroid treatment for Sprue.

“The Parathyroid, in contradistinction to the thyroid belongs to the para-sympathetic group and any excess is disposed of. I have never seen (and doubt whether there are) signs of Parathyroid excess—whatever there may be. I tried gr. 1/10 daily and always found progress slow, and the condition after a certain amount of improvement, remain stationary. I now give gr. 1/10 twice daily for the first 4 to 6 weeks—and then reduce during the next week to once daily and the following week to every other day.”

I must add that I was unable to give larger doses in this case—as I had only a very small stock of parathyroid gland with me.

A CASE OF TUBAL GESTATION ASSOCIATED WITH A TERATOMATOUS CYST OF THE OVARY,
 BY DR. C. F. SHELTON, M.D., L.R.C.P., M.R.C.S., ACTING SENIOR MEDICAL
 OFFICER, EUROPEAN HOSPITAL, DAR ES SALAAM.

Patient.—a Seychellian—aged 30—was admitted to Hospital on 30/10/25 with the following history.

Past history.—Three children—the youngest 3 years of age.

History of present illness.—Last period commenced on August 5th last and lasted four days. It was quite normal in every way. Two days before admission had a severe attack of pain in the lower part of the abdomen which lasted for about 5 or 6 hours and was accompanied by vomiting. Pain recurred on the following day, when she passed a piece of membrane from the vagina, which patient—a very intelligent woman—kept and brought to Hospital with her. Examination of the tissue passed showed it to be a typical, almost complete, decidual cast.

State on admission.—Complaining of pain in lower abdomen. Temp. 99.2. Pulse 88.

Abdomen.—Tender all over the abdomen below the level of the umbilicus. Slight deep rigidity in L.I.F. Abdomen moved well with respiration.

P.V.—Uterus pushed forward—not larger than would be expected in a multipara. No hæmorrhage. In the pouch of Douglas, behind, a tender elastic swelling extending into the left fornix was to be felt.

Blood film showed infection with Sub-tertian parasites.

Diagnosis of an ectopic gestation with hæmatocele in the pouch of Douglas was made. Owing to the fact that there was no immediate urgency in the symptoms and that the blood showed a malarial infection it was decided to give quinine and to delay operation for 24 hours.

At 7.0 p.m. on the day of admission patient had a very severe attack of abdominal pain—for which an injection of morphia was given.

On 31/10/25 the pulse rate was 100 to 105 and Temp. 100.4, while there was marked deep rigidity and tenderness all over the lower half of the abdomen—but more marked on the left side. No increase in the swelling felt p.v.—no hæmorrhage per vaginam. Laparotomy performed the same day by a mid-line suprapubic incision. No free blood or clot found in the peritoneal cavity and on exploring the pelvis the following were found.

1. The ampullary portion of the left Fallopian tube was found to be the seat of a small tubal mole—which had not ruptured into the peritoneal cavity.

2. The right ovary which was in the Pouch of Douglas was the seat of a small ovarian cyst—measuring about 3" x 4". This—together with the left Fallopian tube—was removed and the abdomen closed.

Patient made an uninterrupted recovery and left Hospital on the tenth day after operation.

Examination of specimen removed.

1. The right ovary was the seat of a teratomatous cyst containing sebaceous material together with balls of loosely intertwined hair of a dark colour. The wall of the cyst contained a rudimentary tooth embedded in:—

- (a) a piece of bone.
- (b) a bar of cartilaginous material.
- (c) patches of tissue resembling skin.

2. Left Fallopian Tube was the seat of a very recent tubal mole. At one spot the wall of the tube was greatly thinned—i.e. a para-tubal hæmatocele would probably have occurred very shortly.

A CASE OF CEREBRAL MALARIA—CAUSED BY A PLASMODIUM THOUGHT TO BE IDENTICAL
WITH *P. TENUE*, BY DR. C. F. SHELTON, M.D., L.R.C.P., M.R.C.S.,
ACTING SENIOR MEDICAL OFFICER, EUROPEAN HOSPITAL, DAR ES SALAAM.

The reasons for reporting this case are:—

1. Cases of Cerebral Malaria are very infrequent in Dar es Salaam. (In 1924 one fatal case and in 1923 no cases were reported from the European Hospital).

2. So far as I know this parasite has not been previously reported from East Africa.

Race	...	...	...	...	Sinhalese
Sex	...	...	...	...	Male
Age	...	...	...	...	28
Admitted to Hospital on 9/11/25.					

Past History.—Left Ceylon 10 years ago—since when he had lived continuously in East Africa. Resident in Dar es Salaam and the neighbourhood for the last 8 years. Occasional attacks of “Fever” since living in Africa.

History of present illness.—For a month previous to admission had frequent irregular attacks of fever—not sufficient to prevent him working. Five days previous to admission (*i.e.* 4/11/25) the fever became much worse and he was confined to bed. Is positive that he had taken no quinine during the last month—beyond this could remember nothing about the events of last 5 days. Was brought to Hospital by some natives from his plantation situated about 6 miles out of Dar es Salaam. *On admission.* Looked very ill. Pulse 104—poor volume and tension. B.P. 75 m.m. (systolic). Lips dry and cracked. Tongue dry and furred. Sores on lips. Very apathetic dull and drowsy. Not absolutely comatose—as he could be roused with great difficulty to answer a few simple questions but was quite unable to give any connected account of himself. Speech slurred and indistinct with great difficulty in articulation. No convulsions. No meningeal symptoms. Liver and Spleen not enlarged. No abnormal signs in heart or lungs. No jaundice or vomiting. Retention of urine—eighteen ounces urine drawn off by catheter. The urine was high coloured and contained a moderate cloud of albumen, but no haemoglobin or bile. Blood film crowded with malarial parasites. Definite mental improvement occurred after intravenous injection of 4 grains of quinine bihydrochloride—given dissolved in 10 c.c. normal saline.

On 10/11/25 general condition—both physical and mental—much improved. On 12/11/25 pulse, temperature, and cerebral condition were quite normal.

Discharged from Hospital quite well on 17/11/25.

Note on parasites found.—The parasites in the blood appeared to be identical morphologically with the form described by Professor Stephens—and named by him *Plasmodium tenue* (Proceedings of the Royal Society B. Vol. 87 1914)—as

1. Judging from stained films the parasite seemed to be extremely amoeboid.
2. The cytoplasm was always scanty.
3. The nuclear chromatin was relatively greater in comparison to the bulk of the parasite than is the case with *P. falciparum*—and in addition was very irregular in shape and arrangement.
4. Typical rings were relatively few in number. Dr. J. F. Corson has forwarded thin films from the above case to Professor Stephens for consideration or otherwise.

CASE OF LIVER ABSCESS TREATED BY ASPIRATION AND EMETINE INJECTIONS BY DR.
C. F. SHELTON, M.D., L.R.C.P., M.R.C.S., ACTING SENIOR MEDICAL OFFICER,
EUROPEAN HOSPITAL, DAR ES SALAAM.

H.R. British, Male, Age 36. Admitted to the European Hospital, Dar es Salaam on 24/10/25 with the following history:—

Past history.—Between the years 1909 and 1925 has served abroad in the following places:—

Alexandria, Aden, Lisbon, Sierra Leone and Mozambique (stationed at this latter place from August 1924 to August 1925). Except for an occasional attack of malaria had always enjoyed fairly good health. No clinical history of dysentery.

History of present illness.—While at Mozambique had two attacks of "fever", which he thought was malaria and for which took quinine.

In the early part of April of the present year commenced to suffer from chronic diarrhoea—passing from 3 to 4 stools daily—occasional attacks of abdominal colic and vomiting—no sweating at nights—no blood or mucus in the stools. At the same time he noticed a steady deterioration in his general health and strength. Left Mozambique on 10/8/25.

On 20/8/25 commenced to have pain over the region of the Liver and base of the right lung—the pain extending up towards the right shoulder—and was admitted to Hospital (not in this Territory).

On 24/8/25 while in Hospital he commenced a 16 day course of E.B.I. (48 grains in all)—with a resultant improvement in all his symptoms—although he states that the pain never quite disappeared. On 21/9/25 he embarked on board a passenger ship for passage home—but was transferred here the next day by the Ship's Surgeon owing to a severe recurrence of the pain in the liver region.

State on Admission.—Looked emaciated—complexion sallow, no complaint of pain except on movement. T. 100, Pulse 90 to 100, Tongue clean and moist.

Abdomen.—Spleen not palpable. Liver edge not definitely felt—rigidity and tenderness present over the upper part of the right rectus.

Chest.—Heart H.A.B. in 5th space— $\frac{1}{2}$ " external to nipple line.

On the right side in front there was absolute dulness on percussion up to the 5th rib in the Ant. Axillary line.

Behind over the base of the right lung percussion note was absolutely dull up to the level of the 6th rib—partially so up to the 4th.

Over the whole of this dull area V.F. and V.R. were almost absent—breath sounds also much diminished—and coarse friction was heard over the same area—both behind and in the axilla. Left lung normal.

Further examination.—X Ray screen showed the right dome of the diaphragm pushed up and almost immobile on respiration—the heart at the same time being displaced to left.

<i>Blood.</i>	No Malarial parasites.	...	...	Leucocytes	6000
	Polymorphs	...	...	...	63%
	Lymphocytes	...	...	...	2. %
	Large mononuclears	...	...	...	9%
	Eosinophiles	...	...	...	1%

Faeces No *Entamoeba Histolytica* found.

In view of the fact that there did not appear to be any immediate urgency in this case—and of the fact that the patient had had no emetine by injection it was decided to give a course of this drug hypodermically before proceeding to explore the chest.

One grain of emetine daily was given between the 22/9/25 and 27/9/25 (six grains in all)—but with very slight improvement in the symptoms and no alteration in the physical signs.

On 30/9/25, under general anaesthesia, the chest was explored with an exploring syringe through the 8th intercostal space in the mid-axillary line. Pus was struck at a distance of about $1\frac{1}{2}$ " from the surface and 45 ozs. was drawn off by means of a Potain's Aspirator—the pus evacuated being typical of that from an amoebic abscess of the liver and proving to be sterile on subsequent bacteriological examinations.

Further treatment and course.—Gr. 2 of Emetine was given hypodermically at the time of aspiration—as recommended by Thurston (*Lancet*, November, 1924) and a further course of 1 grain daily for the next three days. In view of the fact that a full course of E.B.I. had already been given when in Hospital the first time, and that repeated and daily examinations of stools failed to show the presence of *Histolytica* cysts no further course of this drug was given. Patient made an uninterrupted recovery and left Hospital on 24/10/25 when his condition was as follows:—

General Condition good. Colour much improved. H.A.B. $\frac{1}{2}$ " internal to N.L. Heart sounds normal.

Slight impairment of percussion note at the base of right lung behind—with slight diminution of V.F., V.R., and breath sounds. No friction sounds heard. No tenderness or pain over liver.

When last heard from on 10/12/25 was in good health with no signs of a recurrence.

REPORT ON THE TREATMENT OF SEVEN CASES OF GONORRHOEA BY INTRAVENOUS INJECTIONS OF MERCUROCHROME AND CALCIUM CHLORIDE, BY DR.
W. K. CONNELL, M.B., CH.B., MEDICAL OFFICER, SONGEA.

All these patients, in addition to the intravenous injections, irrigated twice daily with 1 in 10,000 KMnO_4 ; but Prostatic Massage was stopped. Orchitis patients did not irrigate. All patients were male Africans in the King's African Rifles.

Name	Disease	Treatment	Result
Hassani	Relapse case of Gonorrhoea.	21.11.25-10 c.c. of 5% CaCl_2 intravenously. 28.11.25 -do- 30.11.25 -do- 2.12.25-10 c.c. of 10% -do- 4.12.25 -do- 6.12.25 -do- 8.12.25 -do-	A clinical cure.
Bingu	Acute Gonorrhoea	7.11.25-15 c.c. of 2.5% Mercurochrome intravenously. 14.11.25-10 c.c. of 5% CaCl_2 intravenously. 21.11.25 -do- 28.11.25 -do- 30.11.25 -do- 2.12.25-10 c.c. of 10% -do- 4.12.25 -do-	A clinical cure.
Kasuku	Chronic Gonorrhoea (? Prostatitis) Old infection.	7.11.25-15 c.c. of 2.5% Mercurochrome intravenously. 14.11.25-10 c.c. of 5% CaCl_2 intravenously. 21.11.25 -do- 28.11.25 -do- 30.11.25 -do- 2.12.25-10 c.c. of 10% CaCl_2 -do- 4.12.25 -do- 6.12.25 -do- 8.12.25 -do-	A clinical cure.

Name	Disease	Treatment	Result
Shabani	Chronic Gonorrhoea. "Light up"— Acute Orchitis.	27.11.25-15 c.c. of 2.5% Mercuro- chrome intravenously. 29.11.25 -do- 1.12.25-20 c.c. -do- 3.12.25-25 c.c. -do-	A clinical cure (N.B.— The Orchitis disappear- ed after the second injection).
Hamisi Mwandogo	Chronic Gonorrhoea. "Light up"—Acute Orchitis.	28.11.25-15 c.c. of 2.5% Mercuro- chrome intravenously. 30.11.25 -do- 2.12.25 -do- 4.12.25-10 c.c. of 10% CaCl ₂ .	A clinical cure (N.B.— The Orchitis disappear- ed after the second injection).
Asumani	Chronic Gonorrhoea.	7.11.25-10 c.c. of 5% of CaCl ₂ intravenously. 14.11.25 -do- 21.11.25 -do- 28.11.25 -do- 30.11.25 -do- 2.12.25-10 c.c. of 10% -do- 4.12.25 -do- 6.12.25 -do- 8.12.25 -do-	A clinical cure.
Sulemani	Chronic Gonorrhoea.	14.11.25-15 c.c. of 2.5% Mercuro- chrome intravenously. 21.11.25- -do- 28.11.25 -do- 30.11.25-10 c.c. of 5% CaCl ₂ . 2.12.25-10 c.c. of 10% -do- 4.12.25 -do- 6.12.25 -do- 8.12.25 -do-	A clinical cure.

"Clinical Cure" means that all discharge stopped completely and that the patient felt alright. CaCl₂ will certainly stop a "Gleet".

It is significant that the askaris now *ask* for CaCl₂ treatment, which proves that they feel much the better for it.

A fairly severe Stomatitis sometimes follows the use of Mercurochrome; also some or all of the reactions mentioned in Medical Circular 174. The injection of CaCl₂ causes a sensation of intense heat all over the body (but especially in the perineal region); if the full dose—10 c.c. of 10% solution—be injected too rapidly, the patient breaks into "cold sweat" becomes faint and collapses: about 3 minutes should be spent over the injection of this maximal dose.

REPORT ON A CASE OF SYPHILITIC MYELITIS BY DR. F. R. LOCKHART, M.B., CH. B., MEDICAL OFFICER, DODOMA.

The patient, a female aged about 30 years, was admitted complaining of pain and spasticity of the lower limbs of 6 months duration.

There was a history of syphilis contracted about 12 years previously. No Wassermann test was made.

The pain was stabbing in type, radiating around the waist and in the legs. It was irregular in occurrence.

The Argyll-Robertson pupil was present, ataxia, Romberg's sign and the muscle-joint sense otherwise impaired.

On the other hand the knee jerk was extremely active, Babinski's sign positive and marked spasticity of the lower limbs, with developing paresis, present.

All forms of skin sensation appeared to be unimpaired and there was no involvement of the sphincters

The case was one in which the lesions were presumably more widespread than in normal Tabes Dorsalis and in which the descending as well as the ascending tracts were involved. The retention of sensation, ascertained with care, was surprising.

Under anti-syphilitic treatment the condition appeared to be arrested and the patient absconded.

AN ACCOUNT OF THE LEPER CAMP AT NDANDA WITH NOTES ON TREATMENT, BY
DR. R. MACKAY, M.B., SANITATION OFFICER, LINDI.

The leper camp at Ndanda is run on the lines of a self-supporting village having a plentiful supply of good water all the year as well as its own land for agricultural facilities. It is situated some six miles from the Mission and a member of the staff is responsible for the management of the settlement while a Nursing Sister treats the patients.

There are to date a total of 41 in the camp as follows:—

Males	...	...	...	...	...	16
Children	...	...	...	...	...	9
Females	...	...	...	...	...	16

The incidence of the disease as seen in the camp at the end of 1924 when there were 17 lepers is according to the following figures:—

	Men	Women	Children
Macular... ..	11.4%	28.4%	0%
Anaesthetic	6.5%	11.4%	0%
Maculo-anaesthetic	6.5%	0%	0%
Showing no symptoms	11.4%	6.5%	19.9%

Of the 17 lepers in the camp at that time 6 were males (adult), 8 females and 3 children.

In 1925 the Mission in the surrounding district sent in more cases and an increase of 24 is noticed for the year. Of the 24 admitted in 1925 10 were males, 8 females and 6 children. The following percentages are rough indications of the incidence of the disease as seen in those admitted in 1925:—

	Men	Women	Children
Macular... ..	20.8%	12.5%	4.1%
Anaesthetic	0%	8.3%	0%
Maculo-anaesthetic	12.5%	8.3%	0%
Showing no symptoms	8.3%	4.1%	20.8%

Of the 41 lepers in the camp 1 only is maimed and unable to support himself. All the adult lepers in the camp are married.

The following is the average percentage of the types of the disease as seen in the camp at the end of 1925:—

	Men	Women	Children
Macular... ..	16.1%	20.45%	2.05%
Anaesthetic	3.25%	9.8%	0%
Maculo-anaesthetic	9.5%	4.15%	0%
Non-Leprotic	9.8%	5.3%	20.35%

Cases of supposed Leprosy occasionally find their way into the camp usually sent in from the surrounding districts by the Administrative Officer in charge. The diseases which are mistaken for Leprosy are in this case Tuberculous lesions of the

skin, Yaws and Syphilis. To avoid mistakes of this nature Administrative Officers in the vicinity of Ndanda have been advised to send all doubtful cases to the nearest Mission for diagnosis.

The drugs used in the treatment of Leprosy at Ndanda are "Hydnestyle" and an Italian preparation "Antilebbrina". The Ethyl Hydnocarpate and Olive oil are used in equal parts (50 c.c. of each) with 10 gm. Thymol. Doses of 5—10 c.c. of this preparation are given subcutaneously twice a week. The initial dose is 1 c.c. which is increased by 1 c.c. until the maximum dose of 10 c.c. is reached. This is continued until the patient shows either improvement or signs of toxicity from the drug.

"Antilebbrina" is given in gradually increasing doses starting with $\frac{1}{2}$ c.c. endodermically. This is given daily until 12 doses have been reached when the dose is increased to 1 c.c. which is continued with for 12 more days when the dose becomes $1\frac{1}{2}$ c.c. and so on until a maximum of 3 c.c. a day is being given.

This drug has not been tried by mouth in the case of the Ndanda Lepers.

The results obtained have been disappointing as no apparent change has taken place after treatment. As an alternative form of the drug, the Ethyl-ester of *Hydnocarpus wightiana* with camphor, creosote and Olive oil being less expensive than the preparation in use and perhaps used more was suggested to the Sister in Charge.

No attempt at prophylaxis has been made in the camp and as there are so many children within the susceptible age showing no signs of the disease, it was suggested that a voluntary segregation method be resorted to namely, the children to live in a building separated from their parents' homes which they could reach daily to do their ordinary day's work but not to feed or sleep there. There is every facility for a scheme of that nature to come into effect in the village; the management of the dormitory could be included in the duties of the Nursing Sister and member of the Mission responsible. An attempt to get the relations to look after non-infected children had previously failed.

It is proposed to visit the camp from time to time and if possible to bring about the changes mentioned.

The oldest leper in the camp had the disease in 1895.

BABY SHOW AT KAHAMA.

EXTRACT FROM A REPORT BY SENIOR SUB-ASSISTANT SURGEON D. G. KELKAR,
L.C.P. & S. BOMBAY.

I have the honour to inform you that through the kindness of the Administrative Officer in Charge, Kahama we have been able to hold a Baby Show on the Armistice Day (11th November, 1925). The children and their mothers from the near Sultanates were invited by the Administrative Officer to present themselves for the show and the ready response heartily given by the Natives speaks for itself in that there was a gathering of about 6,000 Natives (men, women and children) ready at the Boma on the morning of the 11th; children of all ages from 3 months old to 12 years were present.

Objects and Reasons:—

- (i) to promote Maternity and Child Welfare.
- (ii) To bring home to the Natives the importance of the care of the Infants and thus assist towards the increase of population.
- (iii) To ingrain the sense of social service and mutual help.
- (iv) To contribute to Educational Propaganda and the spread of knowledge regarding Public Health and Hygienic Measures.
- (v) To collect statistics regarding the Prevalent Diseases amongst them.

- (vi) To distribute small presents to a hundred selected babies (normal, healthy, well cared for) before the whole gathering in order to encourage other mothers to take more care of their children.

Management and the Proceedings:—A committee consisting of three (Mrs. Lake, Mr. Hari Singh the Sub-Assistant Surgeon, and D. G. Kelkar, Senior Sub-Assistant Surgeon) was formed to inspect and choose normal healthy babies and collect statistics regarding the percentage of the Prevalent Diseases amongst the Native children. The interests from the Administrative standpoint were watched by Mr. F. J. Lake, the Administrative Officer. Housing, Feeding and the general management was arranged by Mr. S. M. Beg the Administrative Clerk. Mr. Prichard the Senior Telegraph Inspector, Mwanza, the Revd. Fathers from the Mbulu Mission and the Native Sultans were the interested guests.

The inspecting committee began the work at 3 p.m. on the 11th. The children and their mothers were lined in rows of hundreds and the babies inspected and statistics noted down, the normal healthy babies were selected on one side. The work was done up to 6 p.m. that day and put over for the next day on account of the rain and the large number still remaining. On the 12th the work was finished at 12 noon, and the following statistics were arrived at from the 3,500 babies inspected:—

Apparently healthy	...	...	...	...	...	...	30%
Enlarged Spleens	...	...	...	...	...	...	28%
Hereditary Syphilis	..	...	...	...	...	...	20%
Yaws and other skin lesions	...	...	...	...	...	...	8%
Anaemia, under nourished, Intestinal worms, etc.	...	...	...	...	...	...	14%

Out of the 1,050 apparently healthy babies one hundred babies were selected for prizes, taking care that a few from each Sultanate are selected in order to act as an advertisement to the whole of the Sultanate.

At 4 p.m. before the whole gathering, with Mrs. Lake in the Chair, Mr. F. J. Lake, the Administrative Officer in Charge, delivered an address explaining the purpose of the gathering and drew a clear picture before them of the present state of their children's health and urged them to apply freely for treatment at the Government Hospitals to get rid of the diseases which are a menace to general health. In a few words I assured them that we of the Medical Department were their friends—ever ready to assist them—and that they should open-heartedly meet us and apply for treatment at the Hospital or outside.

At 6 p.m. the prizes were distributed to the selected babies by Mrs. Lake and the gathering dispersed.

DENTAL REPORT FOR THE YEAR 1925.

BY H. M. FISHER, Esq. L.D.S., R.C.S.

The following is a summary of the dental work performed during the year for the European Officials and their families.

The Staff consisted of the writer and two native orderlies.

The work continues to increase; it will be noticed when compared with the reports of previous years to what a large extent the mechanical work has increased; a very great deal of time is spent in doing it: in the opinion of the writer the time has come, when the appointment of a dental mechanic should be considered; time spent in performing this work could be more profitably employed in other branches of dental surgery; time would be available for the regular inspection and treatment of the native school children, the K.A.R. and Police, etc.; a beginning has been made in this direction, but much to the writer's regret, a very small one. It would, presumably, be more desirable to employ a mechanic at a much smaller salary to do this class of work, than a dental surgeon at a much larger one.

The following stations were visited during the year:—

May:	Tanga, Lushoto.
May-June:	Arusha.
June:	Moshi, Tanga, Zanzibar.
September:	Kigoma, Tabora, Dodoma.
December:	Morogoro.

Seventy-two days were spent in visiting out-stations and travelling.

The following is a summary of the operations performed for the European Officials and families.

The number of scalings shewn are cases of pyorrhoea treated; ordinary scaling is carried out as a routine measure and is not recorded.

Attendances	...	...	...	...	...	...	...	1488
Fillings, crowns	...	...	...	...	...	...	...	607
Extractions	...	...	...	...	...	...	...	328
Pulp treatment	...	...	...	...	...	...	...	74
Scaling	...	...	...	...	...	...	...	48
Dentures	...	...	...	...	...	...	...	73
Repairs to dentures	...	...	...	...	...	...	...	71

Zanzibar Officials have attended for treatment as in the past, Zanzibar being visited by the writer in June.

Attendances	...	...	...	...	...	...	...	84
Fillings	...	...	...	...	...	...	...	41
Extractions	...	...	...	...	...	...	...	18
Scalings	...	...	...	...	...	...	...	7
Pulp treatment	...	...	...	...	...	...	...	8
Dentures	...	...	...	...	...	...	...	2
Repairs	...	...	...	...	...	...	...	2

Asiatic officials and their families have been treated when they have presented themselves for treatment.

A number of natives from the various Government Departments and the native town have been treated; this work consists almost entirely of extractions, but a few fillings have been done for them when considered necessary.

The children from the School, K.A.R. and Police Lines have been treated from time to time, about 100 in all; a number of their permanent teeth have been filled, but the work consists chiefly in extracting septic temporary teeth which are generally in a bad condition.

It is not pretended that the native work done is adequate, or is it to the satisfaction of the writer; satisfactory treatment depends on ample time being available in which to do it, and this is not the case.

It is necessary to emphasize that the dental condition of the African is not up to the high standard usually pictured; dental caries and the results therefrom are common in the town natives teeth.

A dental X-ray machine was purchased during the year, and was available for use in November; the results so far have been particularly good; it will be of the greatest help and benefit to the department.

Captain A. S. Newton joined the Department as a Dental Surgeon in October and was posted to Tanga; this officer's services are shared by this Territory and Zanzibar, a third of the year being spent in the latter Protectorate. This appointment will free the writer from visiting the Northern Areas and Zanzibar; it is hoped instead, that he will be able to visit the Southern Areas, the residents there, it is understood, being much in need of attention.

OBSERVATIONS ON THE TRAPPING, POISONING, AND GASSING OF RATS,
BY SANITARY SUPERINTENDENT J. S. HUMPHREY, A.R. SAN. INST., AT THE
HEALTH OFFICE, DAR ES SALAAM.

REPORT FOR 12 MONTHS ENDING DECEMBER 31ST, 1925.

Rats (General). Up to the 22nd of May, three boys (paid by the Health Department) were employed as ratcatchers. Since that date, one Askari from the K.A.R. has also been working as a ratcatcher, trapping in the K.A.R. Cantonment area only. The township is divided into 8 districts, and one matting bag, for collecting dead rats, is used in each district. The bags are each labelled with the name of its particular district. Every morning the "catch" is taken to the Laboratory and a blood smear is taken from about one rat in very ten caught in each district. The carcasses are then burned. The accompanying map* shows the method of dividing the Township into districts. The monthly catches were fairly consistent, and the average cost per rat killed by trapping,† of 4.83 cents, shows a decrease over the six preceding months of 2 cents per rat. Judging from reports from other parts of the world this "cost per rat" killed is very low.

I may also say that in the "costing" the money spent on poison-bait vehicles is included, but not the cost of the poison itself. The total number of rats killed by poisoning is not included in the "costing". The number of poison baits taken during the year was approximately 1,125 and the number of baits laid was approximately 4,000.

The Police and K.A.R. Lines were trapped regularly every day.

Number of Rats caught. The total number of rats caught during the year was 23,154. (The largest number caught in one month was 2,436, caught in September). Of this total 23,037 were *Rattus Rattus Alexandrinus*, and 117 were *Rattus Rattus Norvegicus*. Out of these numbers there were caught at:—

K.A.R. Lines	...	...	...	6,921 rats
Police Lines	...	...	...	3,872 rats
				9,893 leaving 13,144 caught in the town.

Traps. An average daily number of 200 Break-back (Nipper) traps were in use. The catches averaged approximately 34.13 rats for every 100 traps laid. As our stock of wire cage traps was not of a suitable type for catching rats here, I constructed a "Powell" trap, according to specification laid down in the Union of South Africa health pamphlet No. 238 of March, 1924. The cost of making one of these traps would be about Shs. 10/-.

The trap was baited with fish, bread, muhogo, copra (roasted), and meat, and placed in various places in the Township on several different nights. No rats were caught. Although this type of trap is very serviceable in South Africa it would seem to be of no use here.

I afterwards modified the trap by fixing an entrance from an old German wire trap, when it proved very successful. Practically all the *Rattus rattus norvegicus* were caught in this trap in the neighbourhood of Acacia Avenue and Selous Street junction, in the shops of Messrs. Kassum Sunderji, and Messrs. Moloo Brothers.

The following table shows the details of the rat trapping campaign for the year:—

SUMMARY.

Catchers employed	Average No. of traps used daily	Total No. of traps laid	Rats caught			Percentage of rats caught according to traps laid
Civilian 3 ...	} 200	67,640	Alexandrinus	...	23,037	34.24
Military 1 ...			Norvegicus	...	117	
			Total	...	23,154	

*Not reproduced.

†Supervision not included.

<i>Cost.</i>	Cents of a shilling.
Labour ...	90,800 (not including wages of the Military rat catcher).
Bait ...	11,400
Depreciation of traps	6,000

108,200 cents of a shilling divided by 23,154 rats caught equals a cost per rat caught of 4.67 cents.

Poisons. In accordance with the request of the Honourable the Director of Medical and Sanitary Services I experimented with powdered glass mixed with maize flour and sodium arsenite: also maize flour and Barium Carbonate: nine different lots of rats were used in numbers of from 2 to 5 in each lot. Four or five baits mixed with glass were introduced along with 3 or 4 ordinary meal "baits" and one or two Standard Barium Carbonate baits. In no case, (even though the baits other than the "glass" ones were insufficient to provide a reasonable meal for the number of rats being used) was the glass bait eaten. Two or three single rats were not given any food for 24 hours, plenty of water being given. Glass baits were than fed to them.

A bait consisting of $1\frac{1}{2}$ grs. Barium Carbonate
 $1\frac{1}{2}$,, Ground Glass
 12 ,, Maize meal

was eaten and the rat died about 12 hours afterwards.

Two baits of 10 milligrammes of Sodium Arsenite
 5 ,, Ground Glass
 250 ,, Meal

were eaten, and the rats died in 40 hours.

In view of the fact that baits mixed with ground glass were eaten very reluctantly and only when the rats were on the verge of starvation, experiments were discontinued.

Poison baits consisting of the Standard Barium Carbonate* formula were used throughout the year. Baits were laid in:—

Government House.
 ,, Dockyard.
 ,, School.
 King's African Rifles' Lines.
 Infectious Diseases Hospital.
 European Hospital.
 Agricultural Buildings.
 2 Private Houses.
 Post Office.
 Government Press.

The number of baits laid was approximately 4,000 and the number taken was 1,125. Assuming that 800 rats were killed by the 1125 baits eaten, and that maize meal cost cents 4 per pound, the cost of killing the 800 rats was approximately 40 cents. This is not counting the cost of the 20 ozs. of Barium Carmonate used, ($11\frac{1}{4}d$ per lb. approximately).

In each case the poisoning was reported on as being very successful, except in the case of the Dockyard; but about the time of laying the poison in the Dockyard the Superintendent's little dog was "ill", so it was assumed that it had eaten a poison bait. This probably accounts for the fact that the poisoning was not reported as being successful, although more than the average number of baits was eaten.

Gassing with SO_2 ; using a smoke test apparatus. Operations on a small scale were conducted for several days in the K.A.R. cantonment, but the results were not very satisfactory.

*Barium Carbonate 7 grammes or 108 grains.

Maize Meal 50 ,, ,, 773 ,,
 made into a paste with water, makes 50 baits containing approximately two grains of Barium Carbonate per bait.

Baits for Traps. The common bait used was Cassava root (locally known as Muhogo) but occasional changes were made with bread, cooked meat, etc. The cassava root is certainly the best bait procurable for use in Nipper traps.

Fleas. Three lots of fleas were sent to the Laboratory for classification. These fleas were taken from batches of *Rattus rattus alexandrinus* and *Rattus rattus norvegicus*. All were identified as *Xenopsylla Cheopis*.

The following method is used for taking fleas from live rats. The rats are placed in a special cage. A large glass specimen jar is partly filled with a weak Izal solution. The cage (which fits nicely inside the jar) is then immersed and left for a few minutes after the rats are drowned. The cage is then shaken under water, after which it is withdrawn. The fleas float to the surface of the water and can then be easily collected. Each carcase can then be easily examined for any odd flea which may be stuck to the body of a rat.

Owing to a shortage of efficient wire traps for catching live rats, it was not possible to make a record of fleas—(species of fleas per rat and fleas per species of rat etc.).

Rat-proofing. Native houses are, almost without exception, infested with rats. From my own observations, and from information gathered from natives, I find that the rats almost always live in the roofs. It would appear that the method of building the huts allows of a space at the apex of the roof, which forms an ideal nesting place for rodents.

I do not think rats nest in between the layers of makuti. I would therefore suggest that future native huts could be made rat (nest) proof. The sketch below* illustrates my suggestions. If a special rat proof table or cupboard was also made for keeping foodstuffs therein, I think it would be a material help towards keeping down the rat numbers.

A cheap and effective method of making a rat-proof cupboard is shewn also below*.

The Rosehaugh Ginnery was completely rat-proofed during the year. All the rats inside were trapped or poisoned and not a single rat has been seen inside the ginnery since.

Classification. Skins of the common black rat of this locality were sent to the British Museum for classification. They were kindly identified by Mr. Hinton as *Rattus rattus alexandrinus*.

One large rat caught in the bush was identified by the Director of Laboratory as a *Cricetomys Gambianus*. It is a white-tailed pouched rat and measures about 28 inches from nose to tail. This rat was mounted and put in the Museum.—(Kiswahili "Buku". J.O.S.).

*Not reproduced: the sketch illustrates a shield for attachment to posts, legs of cupboards, etc.

ANNUAL REPORT OF THE BACTERIOLOGICAL LABORATORY AT DAR ES SALAAM.

FOR THE YEAR ENDING 31ST DECEMBER, 1925.

BY DR. J. F. CORSON, M.D., CH.B., D.P.H., D.T.M. & H.

GENERAL.

1. *Staff.* Dr. Lester was in charge of the Laboratory until February 19th and Dr. Corson from February 19th to the end of the year. Dr. Speirs worked in the Laboratory for about a month in June and Dr. Burke-Gaffney from September 8th to the end of the year. Dr. Butler, Director of the Laboratory, left the service on transfer elsewhere and Dr. Clearkin was appointed to succeed him. Mr. Hammond, Laboratory Assistant, was present throughout the year. An additional labourer was engaged from September 1st, 1925.

2. *Equipment.* An electric refrigerator arrived, in a broken condition unfortunately, and has not yet been available for use. It was got mainly to keep calf lymph at a lower temperature than that of an ice chest.

ROUTINE WORK.

1. Blood examinations.

(1) *Blood films.*—Total 4,048; Europeans 759; Asiatic 1,227; African 2,062.

Parasites found	European	Asiatic	African
Malaria—			
Trophozoites	128	348	484
Crescents	2	1	4
<i>Spirillum duttoni</i>	1	1	18
<i>Microfilaria bancrofti</i>	—	—	116
„ <i>perstans</i>	—	—	2
Differential cell count	17	5	—
Total „ „	3	6	—

The great majority of malarial parasites were *Plasmodium falciparum*. Thick films, almost exclusively, were received and the method of simultaneous dehaemoglobinisation and staining with weak Giemsa's solution (1-30) was used.

Sufficient opportunity did not occur to compare thick and thin films to enable an opinion to be formed on the value of this method of treating thick films for distinguishing species of parasite. The rare occurrence of gametocytes of *P. vivax*, even in the somewhat hasty examination of a large number of blood films, suggested that this infection was rare. It is possible also that the method is not suitable for discrimination and it is desirable that comparative examinations should be made. In addition, 48 films were received for examination for the presence of trypanosomes which were found in 38. The figures have no special significance. About another thousand films were examined in the course of special investigations.

(2) *Blood culture.* Total 11; Europeans 7; Asiatics 3; African 1. No pathogenic organism was isolated.

(3) *Agglutination tests.* Twenty-six tests were made for typhoid fever with positive results in 7 cases.

(4) *Wassermann tests.* Total 112; Europeans 19; Asiatics 13; Africans 80.

2. Faeces.

(1) *Microscopical.* Total 1120; Europeans 97; Asiatics 56; Africans 967.

Parasites found	European	Asiatic	African
Ova of—			
Ancylostomes	—	11	355
<i>S. mansoni</i>	1	—	12
<i>T. trichiura</i>	—	3	13
<i>Strongyloides</i>	2	—	25

<i>Ascaris</i>	...	...	...	1	2	13
<i>Strongyloides</i>	...	...	...	2	—	25
<i>Entamoeba histolytica</i>	...	...	...	6	1	6
<i>Flagellates</i>	...	...	...	3	—	35

(2) *Bacteriological*. This method of isolation of organisms was used in 35 cases. In 3 cases *B. dysenteriae* Flexner was isolated and in 1 case *B. dysenteriae* Shiga.

3. *Urine*. Total 225; Europeans 69; Asiatics 74; Africans 72; Ova of *Schistosoma haematobium* were found in 1 European and 30 Africans. Sugar was present in 11 specimens. A few examinations were made for *B. typhosus*, *B. coli* and *B. tuberculosis*.

4. *Sputum*. Total 217; Europeans 16; Asiatics 52; African 149. *B. tuberculosis* was found in 4 Asiatics and 49 Africans.

5. *Smears of exudations, surface lesions, etc.*

(1) *Leprosy*. Total 91; *B. leprae* found in 18, all Africans.

(2) *Gonorrhoea*. Total 93. Gonococcus found in 27.

(3) *Various*. A throat swab from a European showed a monilia and a streptococcus. The monilia gave the sugar fermentation reactions of *M. pinoyi* Castellani. Smears and cultures from a few cases of intramuscular abscess showed staphylococci only.

6. *Pathological histology*. There has been a satisfactory increase in the amount of material sent for microscopic examination from other stations. The tissues received included the following,—carcinoma of liver, carcinoma of breast, epithelioma of skin of leg, papilliferous cyst of ovary, endothelioma, sarcoma, lymphosarcoma, fibrosarcoma, angioma, tubal mole, sexual gland of case of 'hermaphroditism,' elephantiasis of breast, tuberculous tissue, etc. Besides Dar es Salaam these were received from the following stations, Arusha, Dodoma, Kigoma, Lindi, Morogoro, Moshi, Singida, Songea, Tanga and Tabora.

7. *Miscellaneous*.

(1) *Medico-legal examinations*. Ten specimens were examined at the request of the police. They did not include anything of special medico-legal interest.

(2) *Plants, roots etc.* Various specimens were received said to possess poisonous or medicinal properties. They were usually roughly tested by feeding to rats. The bruised bark of *Euphorbia candelabrum*, said to be used as a fish poison, was found, on experiment, to kill small fish fairly rapidly. The fish became sluggish in movement and appeared stupefied. The respiration became jerky and the fish died in 3/4 hour. Another species of euphorbia, *E. cuneata*, common in hedges in Dar es Salaam, is said to have a latex very irritating to the human eye. When rubbed on the forearm and when applied to a guinea-pig's eye, no apparent effect was produced.

8. *Public Health Laboratory Work*. It has been the practice to make chemical examinations for the Sanitation Branch of the Medical Department, the Customs, Public Works and Railway Departments. Certain specimens, the examination of which required the skill of a qualified analyst, had to be declined.

(1) *Mineral water and other waters*. Bacteriological examination of 19 specimens of mineral water and chemical examination of 25 specimens of other water were made.

(2) *Milk*. 51 specimens of milk and 8 of condensed milk were examined chemically. There were no unusual features.

(3) *Other food substances*. 3 specimens were examined.

(4) *Rats trapped in Dar es Salaam*. Total 22,768.

They were examined for signs of plague with negative results. They arrived dead owing to the use of killing traps, so could not be examined for fleas.

9. *Meteorological records.* In the absence of a literate native staff these have been kept by Mr. Hammond.

Monthly Temperatures.

Rainfall.

Month	Highest	Mean Max.	Lowest	Mean Min.	Mean Rel. Humid.		Total inches	No of days including Showers	Most in a day
					9. a.m.	4. p.m.			
January	91.4	86	69.8	75.5	78.7%	79.7%	8.5	13	2.3
February	91.4	86.2	71.6	75.5	80	81.3	4.6	12	0.8
March	91.4	88	70.8	73.5	71.3	72.1	2.25	6	1.6
April	94.1	85.7	69.8	74.5	78.4	77.5	4.35	16	0.9
May	91.4	87	66.2	70.9	75.4	81.5	2.08	14	1.2
June	88.6	86	62.6	68.7	79	61.8	1.8	8	0.4
July	86.8	84.5	63.5	66.8	79.6	63.5	1.46	3	0.9
August... ..	87.8	85.3	63.5	66.8	67.4	56.4	0.03	4	0.03
September	87.8	83.5	65.3	68.3	69.5	66.8	1.48	7	0.5
October	88.7	86.2	68	70.9	74.2	70.7	2.1	7	1.0
November	90.5	87	71.6	74	80	77.4	5.8	14	1.2
December	91.4	88	70.7	77.9	80.7	73	12.6	11	3.73

10. *Calf-lymph.* For the last few years Mr. Hammond has had charge of this important branch of routine work. The quality of the lymph has been very satisfactory on the whole. A special observation of over 20 consecutive batches of lymph, made by Dr. Parry at Moshi, showed an average rate of success of from 60 to 70 per cent. During the year 260,600 doses were made, 261,050 were issued, 97 calves were used and 682 grammes of pulp obtained. The technique was the same as in previous years. In no case have anaerobic organisms appeared in the culture test.

NOTES AND SPECIAL ENQUIRIES.

Malaria. The figures of routine blood examinations of Europeans give a fairly accurate indication of the incidence of malarial fever of any severity among Europeans in Dar es Salaam. For several reasons, some obvious, others less so, this does not apply to natives attending the native hospital. A few sampling examinations have been made. Two examinations of pupils of the Government school in Dar es Salaam were made, one on the 19th June and the other on the 22nd September, *i.e.* towards the end of the rainy and dry seasons respectively, so far as such terms can properly be applied to the climate of Dar es Salaam. The following figures show the results in groups of approximate ages.

(1) Examination on the 19th June.

Age	Malarial trophozoites	Crescents	Negative	Total	%
6-9	23	1	8	31	74.2
10-13	37	3	23	60	61.6
14-17	15	...	23	38	39.5
18 and over	5	...	6	11	44.4
	80	4	60	140	57.1

(2) Examination on the 22nd September.

Age	Malarial trophozoites	Crescents	Negative	Total	%
6-9	35	...	14	49	71.4
10-13	63	...	20	83	75.9
14-17	20	1	16	37	56.7
18 and over	8	...	15	23	34.7
	126	1	65	192	64

Taking all pupils between the ages of 6 and 17, in June 58.1% showed infection while in September there were 70.4%. During the three months preceding the June examination roughly 10 inches of rain fell on 42 days, while during the quarter preceding the September examination 2 inches of rain fell in 12 days. Monthly average figures of relative humidity are shown under the heading of meteorology. The question of the influence of various factors on the parasite rate is naturally very complex. An examination of the pupils of the same school made last year, during the period September to December, showed an infection rate of 52.04%. It seems probable therefore that there is a fairly high parasite rate in children and adolescents of the native population of Dar es Salaam all the year round. An examination of 100 adult male employees of the Sanitation Department of Dar es Salaam was made on November 20th and malarial parasites were found in 20%.

Ancylostomiasis. Owing to practical difficulties in obtaining stools after treatment, investigation as to the kind of infecting worm could not be carried out. The few specimens recovered were all *Necator americanus*.

Filariasis. Attention was given to the examination of microfilariae occurring in the blood. They were found in 6.7% of nearly 800 thick films received in the course of routine work and taken, with very few exceptions, if any, in the day time. About 5% of school pupils and of prisoners showed microfilariae in blood taken in the forenoon. An examination of thick blood films of 100 adult patients in the Sewa Hadji Hospital at Dar es Salaam, taken at about 10 p.m. on November 18th, showed *Mf. bancrofti* in 22% and *Mf. perstans* in 2%. A similar examination of 100 adult male employees of the Sanitation Department of Dar es Salaam, the blood being taken between 6.45 and 7.15 a.m. on November 20th, showed 33% infected with *Mf. bancrofti* and 1 with *Mf. perstans*. The two species mentioned only were found, *Mf. bancrofti* being of much more frequent occurrence than *Mf. perstans*, as was noted by German observers. Though occurring in the blood in some numbers in the daytime in some cases, *Mf. bancrofti* was found to have a well marked periodicity in all the cases investigated. Little is known of endemic centres in the territory. Both species are known to be prevalent near the big lakes. In Bukoba district the incidence of *Mf. perstans* was found by German observers to be very high. Captain W. H. Dye has recently found 40% of the people living in the Liwale district infected with *Mf. perstans* a figure somewhat higher than that, (31.5%) found by Mr. Irvine, Sub-Assistant Surgeon, last year in the same area. Captain Dye found *Mf. bancrofti* in 4% of blood films of the same population taken in the daytime. Mr. Webster and Mr. Greening, of the Political Department, have kindly sent some interesting figures, compiled by the latter, of the occurrence of elephantiasis in Mafia Island. They are shown in the following table.

District	Population (approx.)	Scrotum	Leg	Both	Total
Magemani	1,600	22	16	5	43
Utende	4,400	46	33	16	95
Bweni	1,700	29	10	6	45
Balleni	2,200	43	27	15	85
	9,900	140	86	42	268

It has not been possible yet to obtain blood films from this population.

Schistosomiasis. In 1911 attention was directed to the probable heavy incidence and wide spread of urinary schistosomiasis in the territory. In this year Dr. Wolff recorded an investigation made in the Lindi district, where he found 33.4% of persons infected among 1000 examined. Dr. Beck, in 1913, found infection in over 50% of the children of areas near Tunduru. Probably owing to the fact that it frequently causes little interference with daily life, comparatively few cases have been treated in most of the station hospitals in recent years. Besides the Lindi district, prevalence has been noted at Tanga, in the area near Lake Nyassa, in the Ukerewe mainland

and Majita in the Mwanza district and at Mkudani near Mbulu in the Arusha district. In 1921, Dr. Butler, then Director of the Laboratory at Dar es Salaam, found 20% of 435 prisoners infected. In August 1925 the urine of 50 school boys in Dar es Salaam of apparent ages ranging from 6 to 10 years was examined and ova of *Schistosoma haematobium* were found in 16=32%. In November, 1925 an imperfect examination of the urine showed infection in 11% of 46 small boys at Maneromango, about 40 miles south of Dar es Salaam. At Tabora this year, Dr. Meek has found infection in 31% of 164 school children and in 15% of adult prisoners. In a personal communication Dr. Meek says "The infected school children included cases from Tabora, Shinyanga, Kahama, and Nzega. About half the number appeared to have been infected at Shinyanga. Practically all the cases having their origin at Tabora, appeared to have been infected at the Rufita pool where the *Bullinus* were found."

Search for an intermediate host. In the Laboratory report for 1921, Dr. Butler mentions finding a few kinds of snail in Dar es Salaam. While stating that he was not in a position to identify these definitely, it appeared to him that a species of *Bullinus* was found in Bagamoyo Pool and *Physa* or *Physopsis* as well as *Planorbis* in streams, the position of which is unfortunately not given. He says "In all the specimens of *Physa* cercariae were found which were thought to resemble the human bilharzial type. What was hoped to be a satisfactory solution of the problem has however unfortunately been found to fail, for the cercaria found was probably derived from the bilharzia of a bird. All the other types of snail gave entirely negative results. An attempt to infect snails with human miracidia failed."

In 1925 search was made at Dar es Salaam but no species of *Bullinus* was found. No snails were found at Bagamoyo Pool. In the drains at Gerezani and Msimbazi two kinds of snails were found which were identified at the British Museum as *Melanoides zengamus* (Morelet), very closely related to *M. tuberculata* (Muller), and *Theodoxis natalensis* Reeve. In addition *Ampullaria speciosa* Phillipi was found in Dar es Salaam. None of these harboured cercariae at all resembling those of human schistosomes. About 300 *M. zengamus* were dissected and all were infected with cercariae, of which 2 kinds were seen, one with the oral sucker armed with a stylet and the other trichocercous. In June and July two species of snail were received from Dr. Meek, Sanitation Officer at Tabora, collected from pools there. They were identified at the British Museum as *Isidora* (*Physopsis*) *nasuta* v. Martens and *Lanistes ovum* Peters. One out of 30 specimens of *L. ovum* dissected was infected with a non-human cercaria. *I. nasuta* was found in 4 different places in or close to Tabora. Dissection gave the following result:—

Locality	Dissected	Furcocercous	Xiphidiocercous	Both
Chem-chem swamp	19	...	7	...
Mwanza Road... ..	78	13	3	2
Rufita	34	8	...	...
Main Street	50	...	19	...

Forked-tailed cercariae without "eye-spots" were noted by Dr. Meek in *I. nasuta* from Rufita Pool, where some cases of urinary schistosomiasis seemed to have been infected. Other specimens of *Isidora*, not yet identified, from the Tabora sub-district of Karunde showed no infection. Snails collected by Dr. Williams from Mafisi near Morogoro, unfortunately all dead on arrival, were identified at the British Museum as *Isidora* (*Physopsis*) *martensi* Germain, probably identical with *I. globosa* Morelet, *Limnaea undussumae* von Martens, and *Lanistes ovum* Peters. Specimens of, apparently, *Lanistes* & *Ampullaria*, collected in the district of Dar es Salaam by Dr. Scott showed no infection with forked tailed cercariae. Snail shells collected by Dr. Mackay at Masasi in the Lindi district, where urinary schistosomiasis is very prevalent, have not yet been identified. No species of *Bullinus* could be found there.

Infection Experiments.

(1) *Snails*. Attempts were made without success to infect *M. zengamus* and *I. nasuta*, the latter from the Chem-chem swamp, Tabora. Neither snail when observed under the microscope appeared to show attraction for miracidia of *S. haematobium*. Once or twice a miracidium was seen to attach itself to the protruding head of the snail but let go again and swam away.

(2) *Laboratory animals*. Four young white rats, a guinea-pig and a monkey (*Cercopithecus*) were exposed to infection by cercariae of *I. nasuta* from the Tabora pools. They were kept alive for periods of from 70 to 90 days, examinations of faeces and urine being made and finally they were killed and dissected. The results were negative.

Morphology of the cercaria. A complete description cannot be given because the details searched for under the microscope could not be distinguished clearly enough to be convincing. The cercaria appeared to be consistent in measurements and all observable characters with descriptions by Manson-Bahr and Fairley, by Blacklock and in Byam and Archibald's book on tropical medicine. The flame cells could not be counted nor the mucin cells. Two groups of 5 refractile dots, apparently droplets, seen in the ducts traversing the oral sucker, suggested that there were probably 5 pairs of mucin ducts and glands. Droplets were also seen on the tips of the spines when protruded. The ventral sucker was markedly prominent. The following measurements of 4 specimens were made with a camera lucida:—

	I.	II.	III.	IV.
LENGTH				
Body	145	138	150	140
Trunk of tail	198	210	195	170
Furci	70	70	75	60
BREADTH				
Body	55	62	70	48
Trunk of tail	30	32	30	25
Furci	10	10	10	9
ORAL SUCKER				
Length	60	52	57	55
Breadth	35	36	38	34
VENTRAL SUCKER				
Diameter	20	25-28	20	15

The cercariae were fixed in hot 70% alcohol. It is of interest that cattle have no access to the Rufita pool.

Conclusions. An intermediate host still remains to be found. *I. nasuta* may be suspected, being the only snail in which cercariae resembling those of human schistosomes were found. More extended observations and experiments are required. Detail has been given on account of the local interest. As regards incidence it may be suggested that sampling examinations of the population in various parts of the territory would show much higher figures than are indicated by hospital reports of recent years.

INJECTIONS OF DRUGS SUSPENDED IN OIL.

Some interesting results were obtained from experiments on the effects of the intravenous injection of quinine sulphate suspended in oil which were carried out in the Laboratory by Dr. Shircore, Director of Medical and Sanitary Services. They have been recorded elsewhere. It was found that in sheep a much larger dose could safely be given in this way than in solution. Dr. Shircore also made a series of experiments on the effects of intraspinal injection of

trypanocidal drugs, Fournau 309 and neosalvarsan 914, suspended in oil, using monkeys for the experiments. It was found that large doses of 309 could be given and neosalvarsan appeared to be considerably less toxic when mixed with oil than in watery solution.

ENTOMOLOGICAL EXAMINATIONS.

(1) *Tsetse flies*. Examination of the male genitalia of a few batches of flies showed the following proportions.

Source	No. examd.	<i>G. mors.</i>	<i>G. pallid.</i>	<i>G. palp. fuscipes</i>
Liwale	83	82	1	...
Tabora to Kigoma	31	30	...	1
Mr. Kelkar's collection	9	8	1	...
German collections... ..	51	32	18	1

The collection of flies and other arthropods of Mr. Kelkar was made in 1922-23 whilst travelling with the Belgian and English Boundary Commission. According to the accompanying notes, *G. morsitans* was found at altitudes of 4,200 and 4,600 feet.

(2) *Ticks*. Specimens of *Ornithodoros moubata* from the following places were examined for spirochaetes by staining smears of the fluid that exuded on pulling off a leg.

Locality	No. examd.	<i>S. duttoni</i> found.
Dar es Salaam	40	...
Kilosa	30	...
Maneremango	7	...
Morogoro	86	14
Singida	73	...

The spirochaetes found were for the most part similar to those found in the blood, being long and having numerous curves. Short forms also occurred. An attempt to infect a white rat failed. From the fact, however, that spirochaetes were only found in ticks from Morogoro and from different parts of that town, it is unlikely that they were not *S. duttoni*. A monkey was not inoculated.

Some specimens of *Amblyomma variegatum* were included in Mr. Kelkar's collection.

(3) *Fleas*. Specimens of *Xenopsylla cheopis* and *X. braziliense*, *Ctenocephalus*, *Leptopsylla* and *Dermatophilus* were received.

(4) *Ceratopogine midges*. Small midges collected from the window panes of the Laboratory and a bungalow were sent to Dr. J. W. Scott Macfie to whom thanks are due for the following identified list.

Forcipomyia murina (Winn), *F. bi-annulata* Ingram and Macfie, *F. lepidota* Ingram and Macfie, *F. corsoni* Macfie, *Culicoides austeni* Carter, Ingram and Macfie, *C. bedfordi* Ingram and Macfie, *C. distinctipennis* Austen, *C. pycnostrictus* Ingram and Macfie, *C. schultzei* (End), *C. similis* Carter, Ingram and Macfie, *Dasyhelia flava* Carter, Ingram and Macfie, *D. inconspicuus* Carter, Ingram and Macfie.

(5) Some specimens of *Liperosia thirouxi* Roubaud were collected by Dr. Shircore, feeding on a recently shot zebra. The place was above Elpon's Pass at a height of 3300 feet; the time dusk; country thorn bush; August.

Specimens of *Culex triflatus* Edwards were bred by Dr. Shircore from larvae found by him in rock pools at a water-fall on the river Hasafiro between Iringa and Songea at a height of 6,250 feet in August.

These two sets of flies were identified at the British Museum.

Papers published during the year on work done in the Laboratory.

Corson (J.F.). A note on microfilariae in Tanganyika Territory. *Annals of Tropical Medicine and Parasitology* Vol. XIX. No. 4 December, 1925.

Corson (J.F.). The protection of the head against the sun's rays in Tropical Africa. *Jl. Trop. Med. and Hyg.* Vol. XXIX No. 1.

Acknowledgments. For sending interesting material and for help in many ways, acknowledgment is made to the following, Miss Allardes and Miss Kemsley, Messrs. Cayless, Greening and Webster, Drs. Aders, Armstrong, Dye, Graham, Mackay, Maclean, Owen, Parry, Phillips, Shelton, Speirs and Williamson. The Laboratory is particularly indebted to Mr. Fisher, Government Dental Surgeon; Mr. Hornby, Veterinary Pathologist; Drs. Lester, Scott, Meek and Williams and to Mr. Robson and Major Connolly of the British Museum.

J. O. SHIRCORE,
*Director of Medical and Sanitary Services,
 Tanganyika Territory.*

RETURNS.

TABLE I.

Medical Staff:—Disposition of as on 31st December, 1925.

NAME AND QUALIFICATIONS.	RANK.	STATION.	REMARKS.
J. O. SHIRCORE, M.B., Ch.B., (Edin.), L.R.C.P., L.R.C.S. and L.R.F.P.S. (Edin. and Glas.), M.R.C.P. (Edin.).	D.M.S.S. ...	Dar es Salaam	
J. PUGH, M.R.C.S. (Eng.), L.R.C.P. (Lond.).	D.D.M.S. ...	" ...	
A. H. OWEN, B.A. (Camb.), M.R. C.S. (Eng.), L.R.C.P. (Lond.), D.T.M. and H (Camb.).	D.D.S.S. ...	" ...	
P. A. CLEARKIN, M.B., Ch.B., B.A.O. (Belf.), D.P.H. (Irel.).	D. of L. ...	" ...	En route— arrived 4-1-26.
J. F. CORSON, M.D., Ch.B. (Manch.), D.P.H., D.T.M. and H. (Cantab.).	Asst. Bacteri- ologist	" ...	
C. L. JEVERS, L.R.C.S., L.R.C.P. (Edin.), D.T.M. (Liv.), L.R.F. P.S. (Glas.).	S.M.O. ...	Tabora ...	
T. H. SUFFERN, M.B., B.A.O., Ch.B. (Roy. Univ. Irel.).	" ...	Tanga ...	
J. McK. CLARK, M.B., Ch.B. (Aber- deen), D.T.M. (Liv.).	" ...	Mahenge ...	
R. R. SCOTT, M.C., M.B., B.S. (Durham), M.R.C.S. (Eng.), L.R. C.P., D.P.H. (Lond.).	S.S.O. ...	Dar es Salaam	
J. H. THOMSON, M.B., Ch.B. (Aber- deen).	S.M.O. ...	On leave ...	
C. R. H. TICHBORNE, L.A.H. (Dub- lin).	M.O. ...	Kondoa-Irangi ...	
C. R. WALLACE, L.R.C.P., L.R.C.S., L.M. (Irel.).	" ...	On leave ...	
G. R. C. WILSON, M.R.C.S. (Eng.), L.R.C.P. (Lond.).	" ...	" " ...	
C. B. B. REID, M.B., Ch.B., (Edin.), D.T.M. (Liv.).	" ...	Tukuyu ...	
J. H. PARRY, B.A. (Cantab.), M.R. C.S. (Eng.), L.R.C.P. (Lond.).	" ...	Moshi ...	
A. McA. BLACKWOOD, M.B., Ch.B. (Glas.).	" ...	Lindi ...	
J. G. McNAUGHTON, M.D., M.R.C.P., M.B., C.M. (Edin.).	" ...	On leave ...	
C. H. PHILLIPS, L.M.S.S.A., (Lond.).	" ...	Arusha ...	
G. MACLEAN, M.B., Ch.B. (Glas.), D.T.M. (Liv.).	" ...	S. S. duty ...	Ufipa-Tabora Area.
G. A. WILLIAMS, L.R.C.P. (Lond.), M.R.C.S. (Eng.).	" ...	Morogoro ...	
W. H. DYE, M.R.C.S. (Eng.), L.R. C.P. (Lond.), L.D.S., R.C.S. (Eng.), D.T.M. and H. (Lond.).	" ...	S. S. duty ...	Liwale Area.
C. F. SHELTON, M.D., L.R.C.P., M.R.C.S., (Lond.).	" ...	Dar es Salaam	European Hospital.
R. NIXON, M.B., Ch.B., D.T.M., D.P.H. (Liv.).	S.O. ...	Tanga ...	
A. I. MEEK, L.R.C.P., L.R.C.S., D.P.H. (Edin.), L.R.F.P. and S (Glas.).	" ...	Tabora ...	
J. J. B. EDMOND, M.C., M.B., Ch.B., (Edin.), D.T.M. and H. (Lond.).	M.O. ...	Kasanga ...	
O. FITZPATRICK, M.B., Ch.B. (Edin), L.R.C.P., L.R.C.S. (Edin.), L.R. F.P. and S. (Glas.).	" ...	On leave ...	

RETURNS—*Contd.*TABLE I.—*Contd.**Medical Staff:—Disposition of as on 31st December, 1925—Continued.*

NAME AND QUALIFICATIONS.	RANK.	STATION.	REMARKS.
A. R. LESTER, M.B., B.S. (Bombay), F.R.F.P.S., (Glas.), D.P.H., D.T. M. and H. (Edin.).	M.O.	Mwanza	
W. K. CONNELL, M.B., Ch.B. (Glas.).	„	Songea	
F. R. LOCKHART, M.B., Ch.B. (Manch.).	„	Dodoma	
D. V. LATHAM, B.A., M.B., Ch.B., B.A.O. (Dublin).	„	Lushoto	
T. LANGAN, M.B., Ch.B., B.A.O. (Dublin).	„	Tabora	
H. FAIRBAIRN, M.B., Ch.B. (Glas.).	„	S. S. duty	Mwanza Area.
J. WILLIAMSON, M.B., Ch.B. (Edin.).	„	Tabora-Kahama Rly. construction	
C. R. STEEL, M.R.C.S. (Eng.), L.R. C.P. (Lond.).	„	Dar es Salaam	Native Hospital
J. W. GRAHAM, M.B., Ch.B. (Glas.).	„	Kigoma	
R. C. SPEIRS, M.B., Ch.B. (Edin.).	„	Kilosa	
J. S. ARMSTRONG, M.C., B.A., M.B., Ch.B., B.A.O. (Dublin).	„	Dar es Salaam	Native Hospital
H. J. O'D. BURKE-GAFFNEY, M.B., Ch.B., B.A.O. (Dublin), C.T.M. (Lond.).	„	„ „ „	Attached to Laboratory.
R. MACKAY, M.B., Ch.B. (Aberdeen),	S.O.	Lindi	
B. O. WILKIN, M.B., Ch.B. (Edin.),	M.O.	Pangani	
J. C. R. BUCHANAN, M.B., Ch.B. (Edin.), D.T.M. and H. (Eng.).	„	S. S. duty	Ufipa-Tabora Area.
A. MCKENZIE, L.M.S.S.A., M.B., B.S. (Lond.), D.T.M. and H. (Lond.).	S.O.	Mwanza	
G. S. P. NOBLE, M.B., Ch.B. (Glas.).	M.O.	S. S. duty	Ufipa-Tabora Area.
L. A. WILLMOTT, M.R.C.S., L.R. C.P. (Lond.).	„	Bukoba	
I. SANDERSON, M.B., Ch.B. (Edin.).	„	Singida	
H. M. FISHER, L.D.S., R.C.S. (Eng.).	Dental Surgeon	Dar es Salaam	
A. S. NEWTON, L.D.S. (Liv.).	„ „	Tanga	
MISS F. M. PLANT	S.N.S.	Dar es Salaam	European Hospital.
MISS J. FRASER	„	Tanga	
MISS E. L. KEMSLEY, R.R.C.	„	Dar es Salaam	Native Hospital.
MISS E. BISHOP	„	Tabora	
MISS B. G. ALLARDES	Sister and Health Visitor	Dar es Salaam	Maternity and Child Welfare.
MISS W. R. GRANT	Nursing Sister ...	Mwanza	
MISS M. H. B. MACRAE	„ „	Tanga	European Hospital.
MISS M. DONALD	„ „	Dar es Salaam	
MISS K. THOMPSON	„ „	On leave	
MISS A. MUNCASTER	„ „	„ „	
MRS. K. M. TURNLEY	„ „	Arusha	
MISS J. E. WOOTTEN	„ „	On leave	European Hospital.
MRS. E. L. EVANS	„ „	Dar es Salaam	
MISS E. HASLETT	„ „	Tanga	Native Hospital.
MISS K. P. HECKFORD	„ „	Dar es Salaam	
MISS D. A. PORTER	„ „	Tabora	
MISS O. BORRETT	„ „	Moshi	
MISS I. D. McDONALD	„ „	Tabora	
MISS M. C. L. MAPP	„ „	Dar es Salaam	European Hospital.

RETURNS—*Contd.*TABLE I.—*Contd.**Medical Staff:—Disposition of as on 31st December, 1925—Continued.*

NAME AND QUALIFICATIONS.	RANK.	STATION.	REMARKS.
MISS C. M. BISHOP	Nursing Sister ...	Dar es Salaam	European Hospital.
MISS L. M. BISHOP,	" " ...	" " "	" "
MISS E. B. CRICHTON	" " ...	" " "	" "
MISS A. L. RYDER	" " ...	Tabora	Child Welfare Clinic.
MISS M. E. FRASER ... ..	" " ...	...	En route— arrived 4-1-26.
MISS M. KAY ... ..	" " ...	...	" "
MISS J. B. WATT ... ..	" " ...	...	" "
MISS M. D. WHITE ... ..	" " ...	...	" "
M. C. LEMOS, F.C.P.S. (Calcutta).	Asst. Surgeon ...	Iringa	
B. G. PANDIT, L.C.P. and S. (Bombay).	Senior S. A. S.	Bagamoyo ...	
D. G. KELKAR, L.C.P. and S. (Bombay).	" "	...	Anti-Yaws duty.
D. A. PURANDRE, L.C.P. and S. (Bombay).	S. A. S.	Bukoba	
DEWAN CHAND, Cert. Lahore Medical School.	"	Dar es Salaam	Native Hospital.
Y. L. MOOLE, L.C.P. and S. (Bombay).	"	On leave ...	
C. K. BORSADA, L.C.P. and S. (Bombay).	"	Kilwa	
P. S. PARANJE, L.C.P. and S. (Bombay).	"	Arusha	
J. F. MACEDO, L.C.P. and S. (Bombay).	"	Dodoma	
Y. B. KELSHIKAR, L.C.P. and S. (Bombay).	"	Dar es Salaam	Native Hospital.
M. C. K. THOMAS, L.M.S. (Travancore).	"	Tabora	
G. V. SAKRIKAR, L.C.P. and S. (Bombay).	"	Pangani	
K. R. PAGADALA, L.C.P. and S. (Bombay).	"	On leave ...	
B. K. CHRISTIAN, L.C.P. and S. (Bombay).	"	Ujiji	
M. P. DAVE, L.C.P. and S. (Bombay).	"	Dar es Salaam	Attached Health Office.
A. K. PATHREEKAR, Cert. Hyderabad Deccan Medical School.	"	Mwanza	
T. M. JOSEPH, L.M.P. (Madras).	"	Mkalama	
CHUNILAL KHANNA	"	Kigoma	
S. R. ABHYANKAR, L.C.P. and S. (Bombay).	"	Tanga	
W. A. IRVINE, L.C.P. and S. (Bombay).	"	Tabora	
C. K. DESAI, L.C.P. and S. (Bombay).	"	Mwanza	
P. V. GOKHALE, L.C.P. and S. (Bombay).	"	Moshi	
M. B. PANDYA, L.C.P. and S. (Bombay).	"	Tanga	
SANT RAM, Cert. Lahore Medical School.	"	Morogoro ...	
A. M. BHOSLE, L.C.P. and S. (Bombay).	S. A. S.	S. S. duty ...	Ufipa-Tabora Area.

RETURNS—*Contd.*TABLE I.—*Contd.**Medical Staff:—Disposition of as on 31st December, 1925—Continued.*

NAME AND QUALIFICATIONS.	RANK.	STATION.	REMARKS.
HARI SINGH, L.S.M.F. (Punjab). ...	S. A. S.	Kahama	Ufipa-Tabora Area.
D. A. MHAISKAR, L.C.P. and S. (Bombay).	„	Lindi	
W. R. BOWRY, L.M.F. (Bengal). ...	„	Musoma	
DEWAM SINGH, M.P.L. (Lahore). ...	„	Kilosa	
V. S. NIJASURE, L.C.P. and S. (Bombay).	„	Shinyanga	
G. V. GODBOLE, L.C.P. and S. (Bombay).	„	Songea	
HARBAL SINGH, L.M.F. (Punjab). ...	„	Utete	
S. E. PURAM, L.C.P. and S. (Calcutta).	„	Kibaya	
G. A MHAISKAR, L.C.P. and S. (Bombay).	„	Manyoni	
N. B. TOTE, L.C.P. and S. (Bombay).	„	Kondoa-Irangi	
G. V. SANE, L.C.P. and S. (Bombay).	„	Kasulo	
MALUK SINGH, L.S.M.F. (Punjab).	„	Kisaki	
RAM SINGH, L.S.M.F. (Punjab). ...	„	Mwaya (Tukuyu)	
P. N. NAIR, L.M.P. (Madras). ...	„	Mikindani	
L. CORO, Malta University. ...	„	Namanyere	

PRINCIPAL CHANGES.

TRANSFERS.

Dr. G. G. Butler, M.B.E., Director of Laboratory, transferred to Lagos, Nigeria, 30th September, 1925.

Dr. P. F. Nunan, Senior Medical Officer, transferred to Kenya 1st August, 1925.

LEAVE OF ABSENCE.

Europeans.

Dr. G. G. Butler, M.B.E., Director of Laboratory, 19th February till 29th September.

Dr. R. R. Scott, M.C., Senior Sanitation Officer, 12th April till 28th October.

Dr. J. H. Thompson, Senior Medical Officer, 6th December till the end of the year.

Dr. C. R. H. Tichborne, Medical Officer, beginning of the year till 3rd August.

Dr. C. R. Wallace, Medical Officer, 6th September till the end of the year.

Dr. G. R. C. Wilson, Medical Officer, 14th September till the end of the year.

Dr. C. B. B. Reid, Medical Officer, 7th February till 11th July.

Dr. J. G. McNaughton, Medical Officer, 23rd May till the end of the year.

Dr. C. F. Shelton, Medical Officer, beginning of the year till 6th February.

Dr. A. I. Meek, Medical Officer, beginning of the year till 18th March.

Dr. J. J. B. Edmond, M.C., Medical Officer, 28th January till 22nd September.

Dr. O. Fitzpatrick, Medical Officer, 3rd December till the end of the year.

Miss J. Fraser, Senior Nursing Sister, beginning of the year till 25th April.

Mrs. M. A. Cartlidge, Nursing Sister, 21st April till 3rd September.

Miss M. H. B. Macrae, Nursing Sister, beginning of the year till 19th February.

Miss M. Donald, Nursing Sister 7th April till the end of the year.

Miss K. Thompson, Nursing Sister, 8th June till the end of the year.

Miss A. Muncaster, Nursing Sister, 26th October till the end of the year.

Miss J. E. Wootten, Nursing Sister, 3rd December till the end of the year.

Mr. C. D. Dovey, Medical Storekeeper, 24th November till the end of the year.
 Mr. H. W. Hassard, Assistant Medical Storekeeper, 11th April till 30th November.
 Mr. P. W. Morgan, Building Inspector, 24th November till the end of the year.
 Mr. W. A. Moore, Sanitary Superintendent, 14th July till the end of the year.
 Mr. R. E. Owen, Sanitary Superintendent, beginning of the year till 10th August.
 Mr. T. Bell, Sanitary Superintendent, 7th October till the end of the year.
 Mr. N. M. Moore, Clerk-Storekeeper, 25th July till the end of the year.

Asiatics.

Mr. J. F. Macedo, Sub-Assistant Surgeon, beginning of the year till 1st February.
 Mr. Y. B. Kelshikar, Sub-Assistant Surgeon, 2nd June till 24th November.
 Mr. M. C. K. Thomas, Sub-Assistant Surgeon, beginning of the year till 1st March.
 Mr. K. R. Pagadala, Sub-Assistant Surgeon, 22nd September till the end of the year.
 Mr. J. C. X. Rodrigues, Compounder, 7th October till the end of the year.
 Mr. E. Dias, Compounder, 17th November till the end of the year.
 Mr. Habibullah Khan, Compounder, 2nd December till the end of the year.
 Mr. Ahmed Din, Compounder, 23rd October till the end of the year.
 Mr. Mehtab Singh, Compounder, 13th March till 3rd September.
 Mr. A. Varma, Compounder, 28th December till the end of the year.
 Mr. D. B. Somvasi, 4th Grade Clerk, beginning of the year till 25th May.
 Mr. J. B. da Cunha, 2nd Grade Clerk, 10th March till 3rd September.
 Mr. P. de Mello, 4th Grade Clerk, 3rd October to the end of the year.
 Mr. J. de Souza, 1st Grade Clerk, 20th October to the end of the year.

TABLE II.
FINANCIAL.

Expenditure :—

PERSONAL EMOLUMENTS.

Medical Division :

	£	£
Director of Medical and Sanitary Services, Deputy		
Director of Medical Service	2,200	
Clerical Staff, Medical Storekeepers, Packers,		
Messengers, etc.	4,214	
Senior Medical Officers	3,911	
Medical Officers	15,888	
Dental Surgeons	989	
Nursing Staff	5,225	
Superintendent and Matron, Lunatic Asylum ...	648	
Indian Medical Assistants <i>i.e.</i> S.A.S's and		
Compounders	13,087	
Native Dispensers and Native Hospital Attendants	4,228	
Other charges	425	
	<hr/>	
	50,815	

Sanitation Division :

Deputy Director of Sanitary Services and Sanitation	
Officers	3,797
Subordinate Staff for the suppression of Epidemic	
Diseases	6,718

Laboratory Division :

Director of Laboratory and Assistant Bacteriologist,	
Laboratory Assistant and other personnel	
temporarily attached to Laboratory	2,623

Total Personal Emoluments 63,953†

†Not including the local Compensatory Allowance paid to the European Staff, totalling, approximately, £5,665.

	£	£
OTHER CHARGES.		
<i>Administrative Division:</i>		
Incidental Expenditure	601	
<i>Medical Division:</i>		
Miscellaneous charges	1,520	
<i>Sanitation Division:</i>		
Maintenance of Lepers, Lunatics and Incurables ...	3,610	
Sanitary Labour	11,457	
Upkeep of Infectious Diseases Hospitals	1,374	
Sanitary Oils and Disinfectants	481	
Sanitary Equipment... ..	1,682	
Uniforms	368	
<i>Laboratory Division:</i>		
Vaccines and Serum	169	
Miscellaneous	507	
<i>Special Expenditure:</i>		
Sleeping Sickness and Special Sanitary Measures ...	1,654	
Venereal Diseases and Yaws	935	
Maternity and Child Welfare	58	
<i>Hospitals, Dispensaries and Lunatic Asylum: Maintenance of:</i>		
Medical and Surgical Stores	19,214*	
Equipment and Furniture	5,612*	
Upkeep of Hospitals	11,656	
Upkeep of Lunatic Asylum at Lutindi	497	
Uniforms	200	
<i>Miscellaneous Expenditure:</i>		
Books of Reference	211	
Travelling Equipment	789	
Transport Railage and Passages	11,476	
Total Other Charges		74,071
	TOTAL	138,024

*These totals represent the estimated cost of indents under these particular sub-heads despatched during 1925.

Receipts:

STATEMENT OF REVENUE, 1925.

From Hospital Fees, Sale of Drugs, etc	5,450
Fees collected by Port and Marine Department for Bills of Health	952
Sale of Vaccine and Serum	3
Sale of Lymph	20
	<hr/>
	£6,425

TABLES V AND VI.

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND OF DISEASES
(OUT-PATIENTS) FOR THE YEAR 1925.

DISEASES	IN-PATIENTS					OUT-PATIENTS			Total Cases In and Out Patients
	Remain- ing in Hospital at the end of 1924	Yearly Total		Total Cases Treated	Remain- ing in Hospital at the end of 1925	Males	Females	Total	
		Admis- sions	Deaths						
I. Epidemic, Endemic, and Infectious Diseases									
1. Enteric Group—									
(a) Typhoid Fever ... ..	...	26	3	26	4	2	...	2	28
(b) Paratyphoid A. ... ..	...	2	...	2	...	...	...	...	2
(c) Paratyphoid B. ... ..	...	...	...	...	...	...	...	...	...
(d) Type not defined ... ..	...	...	...	...	...	...	...	...	...
2. Typhus ... ..	...	...	...	...	...	...	...	...	...
3. Relapsing Fever	6	182	5	188	7	54	17	71	259
4. Undulant Fever ... ..	...	...	...	...	...	...	...	...	...
5. Malaria—									
(a) Tertian	12	2,263	9	2,275	21	9,879	2,276	12,155	14,430
(b) Quartan ... ..	...	8	...	8	...	9	7	16	24
(c) Aestivo-autumnal	9	1,709	11	1,718	25	8,532	1,219	9,751	11,469
(d) Cachexia	2	222	7	224	12	739	381	1,120	1,344
(e) Blackwater	2	49	15	51	1	1	...	1	52
(f) Cerebral ... ..	...	9	8	9	...	1	...	1	10
6. Smallpox—	1	15	1	16	...	6	2	8	24
Alastrim ... ..	...	...	...	...	...	...	...	...	...
7. Measles ... ..	...	9	...	9	...	47	26	73	82
8. Scarlet Fever ... ..	...	...	...	...	...	1	...	1	1
9. Whooping Cough ... ..	...	10	...	10	...	30	19	49	59
10. Diphtheria ... ..	...	...	...	...	...	...	...	...	...
11. Influenza	6	324	4	330	5	1,026	225	1,251	1,581
12. Miliary Fever ... ..	...	...	...	...	...	...	...	...	...
13. Mumps	1	8	...	9	...	32	6	38	47
14. Cholera ... ..	...	...	...	...	...	...	...	...	...
15. Epidemic Diarrhoea ... ..	...	...	...	...	...	...	...	...	...
16. Dysentery—									
(a) Amoebic	8	138	15	146	5	168	33	201	347
(b) Bacillary ... ..	...	47	3	47	1	211	37	248	295
(c) Undefined or due to other causes ... ..	...	105	6	105	11	28	3	31	136
17. Plague—									
(a) Bubonic	1	7	3	8	...	10	4	14	22
(b) Pneumonic ... ..	...	...	...	...	...	...	...	...	...
(c) Undefined ... ..	...	...	...	...	...	...	...	...	...
18. Yellow Fever ... ..	...	...	...	...	...	...	...	...	...
19. Spirochaetosis ... ..	...	...	...	...	...	...	...	...	...
ictero-haemorrhagica ... ..	...	...	...	...	...	...	...	...	...
20. Leprosy	1	82	4	83	7	125	48	173	256
21. Erysipelas	3	6	2	9	...	1	...	1	10
22. Acute Poliomyelitis ... ..	...	...	...	...	...	...	...	...	...
23. Encephalitis Lethargica ... ..	...	...	...	...	...	...	...	...	...
24. Epidemic Cerebro-Spinal Fever ... ..	...	7	4	7	...	1	...	1	8
25. Other Epidemic Diseases—									
(a) Rubeola (German Measles) ... ..	...	2	...	2	...	...	...	...	2
(b) Varicella (Chickenpox)	1	229	...	230	12	59	21	80	310
(c) Kala Azar ... ..	...	...	...	...	...	...	...	...	...
(d) Phlebotomus Fever ... ..	...	...	...	...	...	...	...	...	...
(e) Epidemic Dropsy ... ..	...	...	...	...	...	...	...	...	...
(f) Dengue ... ..	...	58	...	58	4	7	6	13	71
(g) Yaws	163	5,819	28	5,982	205	28,646	23,549	52,195	58,177
(h) Trypanosomiasis	5	60	7	65	31	1	2	3	68
Carried forward ...	221	11,396	135	11,617	351	49,616	27,881	77,497	89,194

TABLES V AND VI—*Contd.*RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND OF DISEASES
(OUT-PATIENTS) FOR THE YEAR 1925.—*Contd.*

DISEASES	IN-PATIENTS					OUT-PATIENTS			Total Cases In and Out Patients
	Remain- ing in Hospital at the end of 1924	Yearly Total		Total Cases Treated	Remain- ing in Hospital at the end of 1925	Males	Females	Total	
		Admis- sions	Deaths						
Brought forward ...	221	11,396	135	11,617	351	49,616	27,881	77,497	89,114
26. Glanders ... ..	...	...	...	...	...	...	...	...	...
27. Anthrax ... ..	...	2	...	2	...	15	10	25	27
28. Rabies ... ..	...	...	...	...	...	...	...	...	...
29. Tetanus ... ..	...	8	5	8	...	...	1	1	9
30. Mycosis ... ..	...	6	...	6	6	1	...	1	7
31. Tuberculosis Pulmonary and Laryngeal	6	143	56	149	10	127	49	176	325
32. Tuberculosis of Meninges or Central Nervous System	...	...	...	...	...	...	...	...	...
33. Tuberculosis of Intestines or Peritoneum ... ..	...	...	...	...	...	...	...	...	...
34. Tuberculosis of Vertebral Column ... ..	...	...	...	...	...	...	...	...	...
35. Tuberculosis of Bones and Joints ... ..	...	...	...	...	...	...	...	...	...
36. Tuberculosis of Other Organs ... ..	...	26	7	26	1	26	11	37	63
(a) Skin or Subcutaneous Tissue (Lupus) ... ..	...	...	..	...	...	...	...	...	...
(b) Bones ... ..	...	...	...	...	...	...	...	...	...
(c) Lymphatic System ...	...	...	...	...	...	...	...	...	...
(d) Genito-Urinary ... ..	...	...	...	...	...	...	...	...	...
(e) Other Organs ... ..	...	...	...	...	...	...	...	...	...
37. Tuberculosis disseminated	...	...	...	...	...	...	...	...	...
(a) Acute ... ..	...	...	...	...	...	...	...	...	...
(b) Chronic ... ..	...	...	...	...	...	...	...	...	...
38. Syphilis—	...	...	...	...	...	...	...	...	...
(a) Primary	21	454	1	475	28	568	201	769	1,244
(b) Secondary	66	698	1	764	36	3,226	1,971	5,197	5,961
(c) Tertiary ... ..	...	215	6	215	12	767	568	1,335	1,550
(d) Hereditary	10	55	5	65	1	108	145	253	318
(e) Period not indicated ...	...	...	...	...	...	...	...	...	...
39. Soft Chancre	3	54	...	57	6	69	4	73	130
40. A.—Gonorrhoea and its complications	38	638	...	676	15	2,040	168	2,208	2,884
B.—Gonorrhoeal Ophthalmia ... ..	...	...	...	...	...	...	...	...	...
C.—Gonorrhoeal Arthritis	...	...	...	...	...	...	...	...	...
D.—Granuloma Venereum	...	...	...	...	...	...	...	...	...
41. Septicaemia ... ..	...	10	7	10	...	...	...	...	10
42. Other Infectious Diseases	...	...	...	...	...	...	...	...	...
Pyogenic infection	2	18	5	20	4	4	...	4	24
Pyrexia of Uncertain Origin	5	793	4	798	18	745	192	937	1,735
Seven-day Fever ... ..	...	1	...	1	...	...	...	...	1
Others ... ..	...	38	1	38	...	83	8	91	129
II. General Diseases Not Mentioned above.									
43. Cancer or other Malignant Tumours of the Buccal Cavity ... ..	...	...	...	...	...	...	...	...	...
44. Cancer or other Malignant Tumours of the Stomach or Liver ... ..	...	...	...	...	...	...	...	...	...
Carried forward ...	372	14,555	233	14,927	488	57,395	31,209	88,604	103,531

TABLES V AND VI—*Contd.*RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND OF DISEASES
(OUT-PATIENTS) FOR THE YEAR 1925.—*Contd.*

DISEASES	IN-PATIENTS					OUT-PATIENTS			Total Cases In and Out Patients
	Remain- ing in Hospital at the end of 1924	Yearly Total		Total Cases Treated	Remain- ing in Hospital at the end of 1925	Males	Females	Total	
Brought forward ...	372	14,555	233	14,927	488	57,395	31,209	88,604	103,531
45. Cancer or other Malignant Tumours of the Perito- neum, Intestines, Rectum
46. Cancer or other Malignant Tumours of the Female Genital Organs...
47. Cancer or other Malignant Tumours of the Breast	5	1	5	...	...	...	...	5
48. Cancer or other Malignant Tumours of the Skin
49. Cancer or other Malignant Tumours of Organs not specified	14	8	14	2	...	...	...	14
50. Tumours non- malignant	7	91	...	98	3	124	48	172	270
51. Acute Rheumatism	3	42	...	45	...	1,901	343	2,244	2,289
52. Chronic Rheumatism ...	2	126	1	128	3	1,194	331	1,525	1,653
53. Scurvy (including Barlow's Disease)	149	6	149	42	12	3	15	164
54. Pellagra
55. Beri-Beri	4	50	4	54	..	7	...	7	61
56. Rickets	14	3	17	17
57. Diabetes (not including Insipidus)	1	...	1	...	20	3	23	24
58. Anaemia (a) Pernicious	5	...	5	...	4	8	12	17
(b) Other Anaemias and Chlorosis	5	110	16	115	1	493	181	674	789
59. Diseases of the Pituitary Body
60. Diseases of the Thyroid Gland—
(a) Exophthalmic Goitre	1	...	1	...	4	2	6	7
(b) Other diseases of the Thyroid Gland, Myxo- dema
61. Diseases of the Parathyroid Glands
62. Diseases of the Thymus
63. Diseases of the Supra- Renal Glands
64. Diseases of the Spleen
65. Leukaemia—
(a) Leukaemia
(b) Hodgkin's Disease	1	...	1	...	...	...	...	1
66. Alcoholism	6	1	6	...	1	...	1	7
67. Chronic poisoning by mineral substances (lead, mercury, etc.)
68. Chronic poisoning by organic substances (Morphia, Cocaine, etc.)
69. Other General Diseases
Autointoxication
Purpura Haemorrhagica	...	1	...	1	...	...	2	2	3
Haemophilia
Diabetes Insipidus
Carried forward ...	393	15,157	270	15,550	539	61,169	32,133	93,302	108,852

TABLES V AND VI—*Contd.*RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND OF DISEASES
(OUT-PATIENTS) FOR THE YEAR 1925.—*Contd.*

DISEASES	IN-PATIENTS					OUT-PATIENTS			Total Cases In and Out Patients
	Remain- ing in Hospital at the end of 1924	Yearly Total		Total Cases Treated	Remain- ing in Hospital at the end of 1925	Males	Females	Total	
		Admis- sions	Deaths						
Brought forward ...	393	15,157	270	15,550	539	61,169	32,138	93,302	108,852
Other Diseases	6	140	17	146	2	561	166	727	873
III. Affections of the Nervous System and Organs of the Senses.									
70. Encephalitis (not including Encephalitis Lethargica) ...	...	1	1	1	...	...	...	...	1
71. Meningitis or Cerebro-Spinal Meningitis) ... ..	...	3	3	3	...	...	...	...	3
72. Locomotor Ataxia ... ..	...	...	...	...	...	...	...	...	...
73. Other Affections of the Spinal Cord ... ..	...	1	...	1	1	1	1	2	3
74. Apoplexy — ... ..	...	3	2	3	...	3	1	4	7
(a) Haemorrhage... ..	...	...	...	...	...	...	...	...	...
(b) Embolism ... ..	...	...	...	...	...	...	...	...	...
(c) Thrombosis ... ..	...	...	...	...	...	...	...	...	...
75. Paralysis—	1	46	3	47	12	39	8	47	94
(a) Hemiplegia ... ..	...	...	...	...	...	...	...	...	...
(b) Other Paralyses ... ..	...	...	...	...	...	...	...	...	...
76. General Paralysis of the Insane ... ..	...	...	...	...	...	...	...	...	...
77. Other forms of Mental Alienation	5	59	4	64	3	19	11	30	94
78. Epilepsy	4	44	2	48	2	72	19	91	139
79. Eclampsia, Convulsions (nonpuerperal) 5 years or over ... ..	...	...	...	...	...	...	...	...	...
80. Infantile Convulsions ... ..	...	...	...	...	...	...	...	...	...
81. Chorea ... ..	...	5	...	5	...	...	...	...	5
82. A.—Hysteria ... ..	...	2	...	2	...	2	14	16	18
B.—Neuritis	5	87	1	92	4	2,255	370	2,625	2,717
C.—Neurasthenia	3	24	...	27	...	23	13	36	63
83. Cerebral Softening ... ..	...	...	...	...	...	...	...	...	...
84. Other affections of the Nervous System such as Paralysis Agitans ... ..	...	...	...	...	...	...	...	...	...
84a. Other affections of the Nervous System	6	123	2	129	2	4,199	748	4,947	5,076
85. Affections of the Organs of Vision—									
(a) Diseases of the Eye—									
Cataract ... ..	...	31	...	31	4	75	36	111	142
(b) Conjunctivitis	4	379	...	383	10	5,768	2,302	8,070	8,453
(c) Trachoma ... ..	...	...	...	...	...	...	...	...	...
(d) Tumours of the Eye ... ..	...	...	...	...	...	...	...	...	...
(e) Other affections of the Eye	6	156	1	162	12	753	313	1,066	1,228
86. Affections of the Ear or Mastoid Sinus	3	55	...	58	...	2,204	825	3,029	3,087
IV. Affections of the Circulatory System.									
87. Pericarditis ... ..	...	...	...	...	...	4	2	6	6
88. Acute Pericarditis or Myocarditis ... ..	...	3	2	3	...	2	...	2	5
89. Angina Pectoris ... ..	...	...	...	...	...	...	...	...	...
Carried forward ...	436	16,319	308	16,755	591	77,149	36,962	114,111	130,866

TABLES V AND VI—*Contd.*

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND OF DISEASES
(OUT-PATIENTS) FOR THE YEAR 1925.—*Contd.*

DISEASES	IN-PATIENTS					OUT-PATIENTS			Total Cases In and Out Patients
	Remain- ing in H spital at the end of 1924	Yearly Total		Total Cases Treated	Remain- ing in Hospital at the end of 1925	Males	Females	Total	
		Admis- sions	Deaths						
Brought forward ...	436	16,319	308	16,755	591	77,149	36,962	114,111	130,866
90. Other Diseases of the Heart—(a) Valvular									
Mitral ... ..	...	29	2	29	2	49	28	77	106
Aortic ... ..	...	3	1	3	...	5	...	5	8
Tricuspid ... ..	...	...	...	...	...	...	...	...	...
Pulmonary ... ..	...	1	1	1	...	...	...	...	1
(b) Myocarditis ... ..	...	...	...	...	...	...	...	...	...
91. Diseases of the Arteries—									
(a) Aneurism ... ..	...	3	...	3	...	2	...	2	5
(b) Arterio-Sclerosis ... ..	...	1	...	1	...	...	...	...	1
(c) Other diseases ... ..	...	...	...	...	...	...	...	...	...
92. Embolism or Thrombosis (non-cerebral) ... ..	...	...	...	...	...	...	...	...	...
93. Diseases of the Veins—									
Haemorrhoids	1	26	...	27	1	91	18	109	136
Varicose Veins... ..	...	...	...	...	...	...	...	...	...
Phlebitis ... ..	...	...	...	...	...	...	...	...	...
94. Diseases of the Lymphatic System—									
Lymphangitis	1	31	1	32	...	83	27	110	142
Lymphadenitis Bubo (non-specific)	3	121	3	124	1	489	49	538	662
95. Haemorrhage of undetermined cause... ..	...	...	...	...	...	...	...	...	...
96. Other affections of the Circulatory System... ..	1	33	7	34	2	75	18	93	127
V. Affections of the Respira- tory System.									
97. Diseases of the Nasal Passages—									
Adenoids ... ..	...	...	...	...	...	...	...	...	...
Polypus ... ..	...	...	...	...	...	...	...	...	...
Rhinitis ... ..	...	...	...	...	...	...	...	...	...
Coryza ... ..	...	14	...	14	...	159	20	179	193
98. Affections of the Larynx—									
Laryngitis... ..	...	14	1	14	...	100	28	128	142
99. Bronchitis—									
Acute... ..	8	794	4	802	8	18,032	4,994	23,026	23,828
Chronic	1	65	1	66	1	2,862	921	3,783	3,849
100. Broncho-Pneumonia ...	1	120	29	121	7	93	31	124	245
101. Pneumonia—									
(a) Lobar	3	364	85	367	8	75	17	92	459
(b) Unclassified ... ..	...	...	...	...	...	...	...	...	...
102. Pleurisy and Empyema ...	4	88	2	92	2	179	27	206	298
103. Congestion of the Lungs	...	...	...	...	...	...	...	...	...
104. Gangrene of the Lungs...	...	...	...	...	...	...	...	...	...
105. Asthma ... ..	...	54	1	54	1	278	119	397	451
106. Pulmonary Emphysema	1	3	...	4	1	3	2	5	9
107. Other affections of the Lung— ... ..	...	...	...	...	...	...	...	...	...
Pulmonary Spirochaetosis	...	...	...	...	...	...	...	...	...
Abscess of Lungs ... ..	...	2	2	2	...	...	...	...	2
Carried forward ...	460	18,085	448	18,545	625	99,724	43,261	142,985	161,530

TABLES V AND VI—*Contd.*

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND OF DISEASES
(OUT-PATIENTS) FOR THE YEAR 1925.—*Contd.*

DISEASES	IN-PATIENTS					OUT-PATIENTS			Total Cases In and Out Patients
	Remain- ing in Hospital at the end of 1924	Yearly Total		Total Cases Treated	Remain- ing in Hospital at the end of 1925	Males	Females	Total	
Brought forward ...	460	18,085	448	18,545	625	99,724	43,261	142,985	161,530
VI. Diseases of the Digestive System.									
108. A.—Diseases of Teeth or Gums—									
Caries, Pyorrhoea, etc ...	...	16	...	16	...	3,753	1,587	5,340	5,356
B.—Other affections of the Mouth—									
Stomatitis, Glossitis, etc.	...	28	...	28	1	458	142	600	628
109. Affections of the Pharynx									
Tonsils—									
Tonsillitis... ..	1	103	...	104	1	537	135	672	776
Pharyngitis ... ..	...	34	...	34	...	1,562	264	1,826	1,860
110. Affections of the Œsop- hagus ... ..	...	...	...	...	...	...	...	...	...
111. A.—Ulcer of the Stomach	...	1	...	1	1	...	...	...	1
B.—Ulcer of Duodenum	...	...	...	...	...	...	...	...	...
112. Other affections of the Stomach—Gastritis ...	...	59	...	59	2	225	109	334	393
Dyspepsia, etc.	3	26	1	29	...	943	361	1,304	1,333
113. Diarrhoea and Enteritis—									
Under two years ... ..	...	...	...	...	...	...	...	...	...
114. Diarrhoea and Enteritis—									
Two years and over... ..	8	499	29	507	13	3,812	850	4,662	5,169
Colitis ... ..	...	43	...	43	...	152	36	188	231
Ulceration... ..	...	1	1	1	...	...	...	...	1
114a. Sprue ... ..	...	1	...	1	...	...	...	...	1
115. Ankylostomiasis	34	754	124	788	52	2,206	969	3,175	3,963
116. Diseases due to Intestinal Parasites—									
(a) Cestoda (Taenia)	2	144	4	146	1	2,113	817	2,930	3,076
(b) Trematoda (Flukes) ...	...	7	...	7	...	16	2	18	25
(c) Nematoda (other than Ankylostoma)	...	...	...	...	...	...	...	...	...
Ascaris ... ..	...	36	1	36	...	2,682	1,330	4,012	4,048
Trichocephalus dispar ...	...	...	...	...	...	6	...	6	6
Trichina ... ..	...	...	...	...	...	...	...	...	...
Dracunculus ... ..	...	6	...	6	...	1	...	1	7
Strongylus ... ..	...	5	...	5	1	7	3	10	15
Oxyuris ... ..	...	...	...	...	...	29	14	43	43
(d) Coccidia ... ..	...	...	...	...	...	...	...	...	...
(e) Other parasites ... ..	...	...	...	...	...	2	...	2	2
(f) Unclassified ... ..	...	...	...	...	...	...	...	...	...
117. Appendicitis ... ..	...	10	3	10	1	6	2	8	18
118. Hernia	12	115	4	127	8	96	9	105	232
119. A.—Affections of the Anus, Fistula, etc.	...	...	...	...	...	...	...	...	...
B.—Other affections of the Intestines —									
Enteroptosis ... ..	...	...	...	...	...	...	...	...	...
Constipation	2	248	1	250	6	9,813	2,781	12,594	12,844
120. Acute Yellow Atrophy of the Liver ... ..	...	...	...	...	...	...	...	...	...
121. Hydatid of the Liver ...	...	...	...	...	...	...	...	...	...
Carried forward ...	522	20,221	616	20,743	712	128,143	52,672	180,815	201,558

TABLES V AND VI—*Contd.*RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND OF DISEASES
(OUT-PATIENTS) FOR THE YEAR 1925.—*Contd.*

DISEASES	IN-PATIENTS					OUT-PATIENTS			Total Cases In and Out Patients
	Remain- ing in Hospital at the end of 1924	Yearly Total		Total Cases Treated	Remain- ing in Hospital at the end of 1925	Males	Females	Total	
Brought forward ...	522	20,221	616	20,743	712	128,143	52,672	180,815	201,558
122. Cirrhosis of the Liver—									
(a) Alcoholic ... ..	...	...	...	...	...	...	...	...	...
(b) Other Forms ... ..	...	12	5	12	...	7	5	12	24
123. Biliary Calculus ... ..	...	...	...	...	...	...	...	...	...
124. Other affections of the Liver									
Abscess ... ..	...	15	6	15	...	8	6	14	29
Hepatitis ... ..	...	32	...	32	2	101	55	156	188
Cholecystitis ... ..	...	...	...	...	...	...	...	...	...
Jaundice	1	25	2	26	1	56	9	65	91
125. Diseases of the Pancreas	...	...	...	...	...	...	...	...	...
126. Peritonitis (of unknown cause) ... ..	...	4	3	4	...	2	2	4	8
127. Other affections of the Digestive System	3	309	6	312	5	3,267	974	42,41	45,53
VII. Diseases of the Genito- Urinary System (Non- Venereal.)									
128. Acute Nephritis ... ..	...	16	3	16	4	13	5	18	34
129. Chronic „	1	19	3	20	...	44	8	52	72
130. A.—Chyluria ... ..	...	...	...	...	...	...	...	...	...
B.—Schistosomiasis ...	1	100	1	101	2	485	124	609	710
131. Other affections of the Kidneys—									
Pyelitis, etc. ... ..	...	4	...	4	...	1	...	1	5
132. Urinary Calculus ... ..	...	7	...	7	...	8	...	8	15
133. Diseases of the Bladder—									
Cystitis ... ..	...	24	...	24	...	83	11	94	118
134. Diseases of the Urethra—									
(a) Stricture... ..	4	36	2	40	2	100	...	100	140
(b) Other ... ..	...	19	...	19	...	97	...	97	116
135. Diseases of the Prostate—									
Hypertrophy ... ..	...	...	...	...	...	...	...	...	...
Prostatitis... ..	...	1	...	1	...	7	...	7	8
136. Diseases (Non-Venereal) of the Genital Organs of Man—									
Epididymitis	2	27	...	29	...	39	...	39	68
Orchitis	12	114	1	126	5	411	...	411	537
Hydrocele... ..	15	183	2	198	13	172	...	172	370
Ulcer of Penis ... ..	...	...	...	...	...	...	...	...	...
Other Diseases... ..	17	97	4	114	15	155	7	162	276
137. Cysts or other Malignant Tumours of the Ovaries ...	1	1	...	2	...	...	1	1	3
138. Salpingitis—Abscess of the Pelvis ... ..	...	...	...	...	...	...	...	...	...
139. Uterine Tumours (non-malignant) ... ..	...	...	...	...	...	...	...	...	...
140. Uterine Haemorrhage (non-puerperal) ... ..	...	4	...	4	...	...	32	32	36
141. A.—Metritis ... ..	...	7	...	7	...	...	17	17	24
B.—Other affections of the Female Genital Organs—									
Displacement of Uterus...	...	2	...	2	...	...	13	13	15
Amenorrhoea ... ..	...	...	...	...	...	...	26	26	26
Carried forward ...	579	21,279	654	21,858	761	133,199	53,967	187,166	209,024

TABLES V AND VI—*Contd.*RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND OF DISEASES
(OUT-PATIENTS) FOR THE YEAR 1925.—*Contd.*

DISEASES	IN-PATIENTS					OUT-PATIENTS			Total Cases In and Out Patients
	Remain- ing in Hospital at the end of 1924	Yearly Total		Total Cases Treated	Remain- ing in Hospital at the end of 1925	Males	Females	Total	
		Admis- sions	Deaths						
Brought forward ...	579	21,279	654	21,858	761	133,199	53,967	187,166	209,024
Dysmenorrhoea ... ..	...	14	...	14	...	...	89	89	103
Leucorrhoea ... ..	...	3	...	3	...	...	35	35	38
Ovaritis ... ..	...	6	...	6	1	...	17	17	23
Vaginiti ... ..	...	4	...	4	...	...	3	3	7
Other conditions	5	50	4	55	...	...	85	85	140
142. Diseases of the Breast (non-puerperal)—									
Mastitis ... ..	...	...	...	...	...	...	...	...	...
Abscess of Breast ... ..	...	...	...	...	...	...	...	...	...
VIII. Puerperal State.									
143. A.—Normal Labour ...	...	608	1	68	3	...	10	10	78
B.—Accidents of Pregnancy—									
(a) Abortion	1	28	...	29	...	...	29	29	58
(b) Ectopic Gestation... ..	...	...	...	...	...	...	...	...	...
(c) Other accidents of Pregnancy ... ..	...	...	...	...	...	...	...	...	...
144. Puerperal Haemorrhage ...	...	...	...	...	...	...	15	15	15
145. Other accidents of Par- turation	1	14	1	15	...	...	6	6	21
146. Puerperal Septicaemia ...	...	6	3	6	...	...	12	12	18
147. Phlegmasia Dolens... ..	...	...	...	...	...	...	...	...	...
148. Puerperal Eclampsia ... ..	...	...	...	...	...	...	...	...	...
149. Sequelae of Labour... ..	...	...	...	...	...	...	...	...	...
150. Puerperal affections of the Breast ... ..	...	14	...	14	1	...	97	97	111
IX. Affections of the Skin and Cellular Tissues.									
151. Gangrene... ..	...	2	1	2	...	...	...	...	2
152. Boil	1	88	...	89	5	1,584	208	1,792	1,881
Carbuncle	1	11	...	12	...	10	2	12	24
153. Abscess—	13	376	5	389	19	1,179	247	1,426	1,815
Whitlow ... ..	...	4	...	4	...	38	7	45	49
Cellulitis	3	180	2	183	10	826	136	962	1,145
Ulcers	192	2,058	18	2,250	151	16,536	4,031	20,567	22,817
154. A.—Tinea ... ..	...	2	...	2	...	203	48	251	253
B.—Scabies	7	155	...	162	8	5,195	1,242	6,437	6,599
155. Other Diseases of the Skin—									
Erythema ... ..	...	...	...	...	...	...	...	...	...
Urticaria	5	11	...	16	...	83	35	118	134
Eczema	1	43	1	44	...	602	215	817	861
Herpes ... ..	...	4	...	4	1	75	11	86	90
Psoriasis ... ..	...	8	...	8	...	32	11	43	51
Elephantiasis	24	129	5	153	11	143	35	178	331
Myiasis ... ..	...	3	...	3	...	24	2	26	29
Chigoes	1	64	1	65	2	899	194	1,093	1,158
Cutaneous Leishmaniasis ...	...	...	...	...	...	...	...	...	...
Other conditions	10	213	4	223	2	1,200	218	1,418	1,641
Carried forward ...	844	24,837	700	25,681	975	161,828	61,007	222,835	248,516

TABLES V AND VI—*Contd.*RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND OF DISEASES
(OUT-PATIENTS) FOR THE YEAR 1925.—*Contd.*

DISEASES	IN-PATIENTS					OUT-PATIENTS			Total Cases In and Out Patients
	Remain- ing in Hospital at the end of 1924	Yearly Total		Total Cases Treated	Remain- ing in Hospital at the end of 1925	Mal s	Females	Total	
		Admis- sions	Deaths						
Brought forward ...	844	24,837	700	25,681	975	161,828	61,007	222,835	248,516
X. Diseases of Bones and Organs of Locomotion (Other than Tuberculous)									
156. Diseases of Bones—									
Osteitis	2	59	...	61	...	50	48	98	159
157. Diseases of Joints—									
Arthritis ... ..	...	114	...	114	8	832	407	1,239	1,353
Synovitis ... ..	...	11	...	11	...	37	6	43	54
158. Other Diseases of Bones or Organs of Locomotion ...	12	227	5	239	3	1,287	234	1,521	1,760
XI. Malformations.									
159. Malformations... ..	...	5	...	5	1	8	...	8	13
Hydrocephalus... ..	...	...	...	...	...	1	...	1	1
Hypospadias ... ..	...	...	...	...	...	...	...	...	...
Spina Bifida, etc. ... ..	...	...	...	...	...	...	...	...	...
XII. Diseases of Infancy.									
160. Congenital Debility ...	...	...	...	...	...	...	...	...	...
161. Premature Birth ... ..	...	4	4	4	...	...	1	1	5
162. Other affections of Infancy	...	...	...	...	...	...	...	...	...
163. Infant Neglect (infants of three of months or over	...	...	...	...	...	...	...	...	...
XIII. Affections of Old Age.									
164. Senility—									
Senile Dementia ... ..	...	...	...	...	...	...	...	...	...
XIV. Affections produced by External Causes									
165. Suicide by Poisoning ...	...	...	...	...	...	...	...	...	...
166. Corrosive Poisoning (intentional)	...	...	...	...	...	...	...	...	...
167. Suicide by Gas Poisoning	...	...	...	...	...	...	...	...	...
168. Suicide by Hanging or Strangulation	...	1	...	1	...	...	...	...	1
169. Suicide by Drowning ...	...	...	...	...	...	...	...	...	...
170. Suicide by Firearms ...	...	...	...	...	...	...	...	...	...
171. Suicide by cutting or stabbing instruments	...	...	...	...	...	...	...	...	...
172. Suicide by jumping from a height	...	...	...	...	...	...	...	...	...
173. Suicide by crushing ...	...	...	...	...	...	...	...	...	...
174. Other Suicides... ..	...	...	...	...	...	...	...	...	...
175. Food Poisoning—									
Botulism ... ..	...	6	1	6	...	1	...	1	7
176. Attacks of Poisonous Animals—									
Snake Bite	1	13	...	14	1	7	2	9	23
Insect Bite ... ..	...	12	...	12	...	57	6	63	75
177. Other Accidental Poison- ings ... ..	...	4	1	4	...	3	...	3	7
178. Burns (by Fire) ... ..	...	...	...	...	...	...	...	...	...
179. Burns (other than by Fire)	...	41	5	41	2	137	19	156	197
Carried forward ...	859	25,334	716	26,193	990	164,248	61,730	225,978	252,171

TABLES V AND VI—*Contd.*RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND OF DISEASES
(OUT-PATIENTS) FOR THE YEAR 1925.—*Contd.*

DISEASES	IN-PATIENTS					OUT-PATIENTS			Total Cases In and Out Patients
	Remain- ing in Hospital at the end of 1924	Yearly Total		Total Cases Treated	Remain- ing in Hospital at the end of 1925	Males	Females	Total	
		Admis- sions	Deaths						
Brought forward ...	859	25,334	716	26,193	990	164,248	61,730	225,978	252,171
180. Suffocation (accidental)...
181. Poisoning by Gas (accidental)
182. Drowning (accidental)
183. Wounds (by Firearms, war excepted)	5	2	5	...	1	...	1	6
184. Wounds by cutting or stabbing instruments	30	...	30	30
185. Wounds by Fall
186. Wounds (in Mines or Quarries)
187. Wounds (by Machinery)...
188. Wounds (crushing e.g. railway accidents, etc.)
189. Injuries inflicted by Animal Bites, Kicks, etc.	...	1	1	1	...	2	2	4	5
190. Wounds inflicted On Active Service
191. Execution of civilians by belligerents
192. A.—Over Fatigue B.—Hunger or Thirst	3	1	3	...	2	...	2	5
193. Exposure to Cold, Frost Bite, etc.
194. Exposure to Heat Heat Stroke	3	...	3	...	1	...	1	4
Sunstroke
195. Lightning Stroke
196. Electric Stroke
197. Murder by Firearms
198. Murder by cutting or stabbing Instruments
199. Murder by Other Means
200. Infanticide (Murder of an Infant under one year)
201. A.—Dislocation	8	1	9	9
B.—Sprain	3	...	3	...	68	9	77	80
C.—Fracture ...	3	60	6	63	5	15	5	20	83
202. Other External Injuries— Wounds, contused	4	...	4	...	109	13	122	126
Wounds, accident, septic, etc. ...	9	302	3	311	18	1,142	161	1,303	1,614
Contusions, Bruises Abrasions, etc.	1	1	1	...	43	4	47	48
Circumcisions	2	...	2	...	...	...	...	2
General Injuries ...	2	13	2	15	...	88	10	98	113
Local Injuries ...	45	1,214	37	1,259	71	14,993	1,669	16,662	17,921
203. Deaths by Violence or Unknown Cause
XV. Ill-Defined Diseases.									
204. Sudden Death (cause unknown)
Carried forward ...	918	26,945	769	27,863	1,084	180,750	63,604	244,354	272,217

TABLES V AND VI—*Contd.*

RETURN OF DISEASES AND DEATHS (IN-PATIENTS) AND OF DISEASES
(OUT-PATIENTS) FOR THE YEAR 1925.—*Contd.*

DISEASES	IN-PATIENTS					OUT-PATIENTS			Total Cases In and Out Patients
	Remain- ing in Hosp tal at the end of 1924	Yearly Total		Total Cases Treated	Remain- ing in Hospital at the end of 1925	Males	Females	Total	
		Admis- sions	Deaths						
Brought forward ...	918	21,945	769	27,863	1,084	180,750	63,604	244,354	272,217
205. Diseases not already specified or ill-defined—									
Ascites	1	48	14	49	8	41	11*	52	101
Oedema ... ..	...	...	...	...	...	...	...	...	...
Asthenia ... ..	...	...	...	...	...	...	...	...	...
Shock ... ..	...	...	...	...	...	...	...	...	...
Hyperpyrexia ... ..	...	...	...	...	...	...	...	...	...
B.—Malingering ... ..	...	...	...	...	...	...	...	...	...
XVI. Diseases, the Total of which have not caused ten deaths.	1	1	...	2	...	9	1	10	12
206. Filariasis... ..	1	16	...	17	...	20	6	26	43
TOTAL ...	921	27,010	783	27,931	1,092	180,820	63,622	244,442	272,373

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